USAirconditioning DISTRIBUTORS

The world's largest privately owned HVAC distributor

1.5 TO 5 TONS YORK HEAT PUMPS CONDENSING UNITS

YZB 13 SEER R-410a Single Phase

have the following available benefits and options

Please, specify the following:

High/Low Pressure switch, Internal Protections
Factory Installed Filter Drier
Isolated Compressor Compartment
Low Sound Operation with Low RPM Fans
5 Years Parts Warranty
10 Years Compressor Warranty
Choice of colors to match building
T2950 365 Days Thermostat
BAS Networkable with free Web Software
ArmorGuard Stainless Steel 316 Corrosion Protection on coils

Please call us !

Samy Rezine	310-420-6767	samy@rezine.net
Karine Leblanc	310-420-7066	karine@rezine.net
Maher Syada	626-255-6406	maher@rezine.net
Michelle Sangalang	626-854-4613	michelle@rezine.net

http://www.rezine.net

YORK®
Heating and Air Conditioning

TECHNICAL GUIDE

AFFINITY
SPLIT-SYSTEM HEAT PUMPS
13 SEER – R-410A
MODELS: YZB018 THRU 060
(1.5 THRU 5 NOMINAL TONS)

ISO 9001
Certified Quality
Management System

Due to continuous product improvement, specifications are subject to change without notice.

Visit us on the web at www.york.com

Additional rating information can be found at www.ari.org/aridirectory.

DESCRIPTION

The YZB Series unit is the outdoor part of a versatile heat pump system. It is designed to be custom matched with one of our complete line of evaporator sections, each designed to serve a specific function. Matching air handlers are available for upflow, downflow, and horizontal left or right application to provide a complete system. Electric heaters are available if required. Add-on coils are available for use with upflow, downflow, or horizontal furnaces. Field installed accessories are available as needed.

WARRANTY

5-year limited parts warranty.
10-year limited compressor warranty.

FEATURES

- **Superior Coil Protection –** A stamped decorative metal coil guard completely protects coil from debris and other large damaging material while a polymer mesh further protects the coil against smaller particles.
- **Isolated Compressor Compartment –** A molded composite bulkhead isolates the compressor from the rest of the unit reducing sound and vibration.
- **Protected Compressors –** Each compressor is protected against high and low pressure as well as excessive temperature. This is accomplished by by the simultaneous operation of a high pressure relief valve and temperature sensors which protect the compressor if undesirable conditions occur.
- **Environmentally Friendly Refrigerant –** Next generation refrigerant R-410A delivers environmentally friendly performance, with zero ozone depletion.
- **Durable Finish –** Automotive quality finish provides the ultimate protection from harmful U.V. rays as well as rust creep ensuring long-lasting high quality appearance. A powder-paint topcoat is applied over a baked-on primer, using a galvanized, zinc coated steel base material. The result is a finish that has been proven in testing to provide 33% greater durability than conventional powder-coat finishes.
- **Lower Installed Cost –** Designed to provide enhanced installability by featuring a slide-down control compartment allowing easy access to control components along with angled service valves to reduce overall installation time and cost.
- **Low Operating Sound Levels –** A fan design boasting technology adapted from aeronautic and defense engineering provides for whisper quiet operation by allowing airflow to flow smoothly and efficiently across the fan tips.
- **Filter-Drier** – A factory installed, solid core liquid line filter-drier filters harmful debris and moisture from the system.
- **Easy Service Access –** A full end, full service, access panel with handle makes for easy entry to internal components.
- **Long Lasting Operation –** Strong and durable composite base pan provides added strength while resisting rust and corrosion as well as reducing sound and vibration.
- **Complete System Control –** These heat pumps utilize the unique microprocessor defrost control system to provide optimal comfort as well as monitor the overall system for reliable operation. The defrost control system continuously monitors the space environment to maintain optimum efficiency. It initiates defrost only when necessary to further reduced heating costs and improve reliability. Supplemental heat can only operate below the balance point and then only upon need. In the event improper operating conditions occur (high temperature and/or high pressure), the will automatically shut the system down to extend the life of the heat pump. Rapid cycling is prevented by use of an internal anti-recycle timer. The defrost control features an internal memory to aid the technician in troubleshooting, reducing service time and cost.

Certified in accordance with the Unitary Small Equipment certification program, which is based on ARI Standard 210/240.

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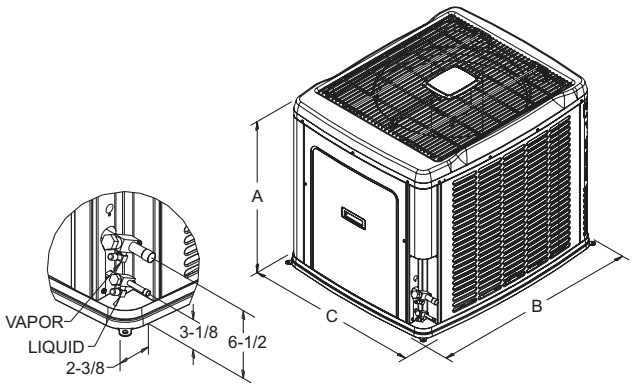
Physical and Electrical Data

MODEL		YZB1811	YZB02411	YZB03011	YZB03611	YZB04211	YZB04811	YZB06011
Unit Supply Voltage		208/230 – 1 – 60						
Normal Voltage Range[1]		187 to 252						
Minimum Circuit Ampacity		14.2	18.8	22.0	25.6	32.1	35.3	43.7
Max. Overcurrent Device Amps [2]		25	30	35	40	50	60	60
Min. Overcurrent Device Amps [3]		15	20	25	30	35	40	45
Compressor Type[4]		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Compressor Amps	Rated Load	11.0	14.7	16.4	19.3	24.5	27.0	33.7
	Locked Rotor	51	60	73	88	105	113	150
Crankcase Heater		No	No	No	No	No	No	No
Fan Motor Amps	Rated Load	0.5	0.5	1.5	1.5	1.5	1.5	1.5
Fan Diameter Inches		22	22	22	22	22	22	22
Fan Motor	Rated HP	1/15	1/15	1/4	1/4	1/4	1/4	1/4
	Nominal RPM	850	850	850	850	850	850	850
	Nominal CFM	2,050	2,250	3,200	3,250	3,250	3,500	3,500
Coil	Face Area Sq Ft	14.86	17.15	17.15	20.58	20.58	20.58	20.58
	Rows Deep	1	1	1	1	1	2	2
	Fin /Inch	22	22	22	22	22	22	22
Liquid Line Set OD (Field Installed)		3/8	3/8	3/8	3/8	3/8	3/8	3/8
Vapor Line Set OD (Field Installed)		3/4	3/4	3/4	3/4	7/8	7/8	7/8
Unit Charge (Lbs - Oz)[5]		7-1	7-10	7-9	9-5	9-2	12-8	12-8
Charge Per Foot, oz.		0.62	0.62	0.62	0.62	0.67	0.67	0.67
Operating Weight Lbs		175	190	195	220	220	260	265

1 Rated in accordance with ARI Standard 110, utilization range “A”.
2 Dual element fuses or HACR circuit breaker. Maximum allowable overcurrent protection.
3 Dual element fuses or HACR circuit breaker. Minimum recommended overcurrent protection.
4 All scrolls listed with superscript “B” are Bristol scrolls. All scrolls listed with superscripts “C” are Copeland scrolls.
5 The Unit Charge is correct for the outdoor unit, matched indoor coil and 15 feet of refrigerant tubing. For tubing lengths other than 15 feet, add or subtract the amount of refrigerant, using the difference in length multiplied by the per foot value.



All dimensions are in inches. They are subject to change without notice. Certified dimensions will be provided upon request.

DIMENSIONS

Unit Model	Dimensions (Inches)			Refrigerant Connection Service Valve Size	
	A	B	C	Liquid	Vapor
018	29-1/2	37	31	3/8”	3/4”
024	33-1/2	37	31		
030	33-1/2	37	31		
036	39-1/2	37	31		
042	39-1/2	37	31		7/8”
048	39-1/2	37	31		
060	39-1/2	37	31		

HEATING PERFORMANCE - With Air Handler

UNIT MODEL	AIR HANDLER MODEL		W	COOLING RATED CFM	NET MBH TOTAL	NET MBH SENS.	SEER	EER
1 PH HP WITH AV / SV - VARIABLE SPEED								
YZB01811	AV24		17	600	18	13	14	11.5
YZB02411	AV24		17	800	23.4	17.1	14	11.5
YZB03011	AV36		17	1000	30	21.2	14	11.5
YZB03611	AV36		17	1200	35.8	26.9	14	12
	AV/SV48		24	1200	35.8	26.9	14	11.5
YZB04211	AV/SV48		24	1400	41.5	32.6	14	11.5
YZB04811	AV/SV48		24	1600	46.5	34.7	13.5	11
YZB06011	AV/SV60		24	1780	55	40.2	13.05	11
1 PH AHP WITH AHP								
YZB01811	AHP18		17	600	18	13.2	13	11
YZB02411	AHP24		17	800	22.8	16.7	13	11
YZB03011	AHP30		17	1000	29.2	21.1	13	11
	AHP36		17	1000	29.2	21.1	13	11
YZB03611	AHP42		21	1200	34.4	25.8	13	11
YZB04211	AHP/SHP48		24	1400	41	31.8	13	11
YZB04811	AHP/SHP48		24	1600	46	33	13	11
	AHP/SHP60		24	1600	46	33	13.25	11
YZB06011	AHP/SHP60		24	1800	56	40	13	11

Cooling MBH based on 80°F entering air temperature, 50% RH, 95 F OAT and rated air flow.

HEATING PERFORMANCE - With Air Handler

UNIT MODEL*	AIR HANDLER	ARI HEATING2 47°F MBH	47°F COP	47°F KW	17°F MBH	17°F COP	17°F KW	HSPF STD
1 PH HP WITH AV / SV / F*FV - VARIABLE SPEED								
YZB01811	AV24	18	3.42	1.54	11.2	2.24	1.46	8.25
YZB02411	AV24	23.2	3.68	1.85	13.5	2.28	1.73	8.25
YZB03011	AV36	29.2	3.66	2.34	17.6	2.2	2.34	8.15
YZB03611	AV/SV48	36	3.5	3.01	23.6	2.26	3.06	8.3
YZB04211	AV/SV48	42	3.82	3.22	27.8	2.48	3.28	8.2
YZB04811	AV/SV48	48	3.6	3.91	32.6	2.26	4.23	8.1
YZB06011	AV/SV60	57	3.58	4.67	34.4	2.34	4.31	8.35
1 PH HP WITH AHP / SHP / F*FP								
YZB01811	AHP18	18	3.28	1.61	11.6	2.32	1.46	8
YZB02411	AHP24	24	3.44	2.04	14.2	2.38	1.75	8
YZB03011	AHP36	30	3.44	2.56	18.3	2.28	2.35	8
YZB03611	AHP42	36	3.36	3.14	24.4	2.32	3.08	8
YZB04211	AHP/SHP48	42	3.66	3.36	28.4	2.54	3.28	8
YZB04811	AHP/SHP48	48	3.5	4.1	33.2	2.3	4.23	8
	AHP/SHP60	48	3.5	4.1	33.2	2.3	4.23	8
YZB06011	AHP/SHP60	57	3.54	4.76	34.6	2.36	4.3	8

1 Rated CFM same as for cooling.

2 Heating MBH based on ARI standards of 70° DB entering indoor air, 72% RH outdoor air with 25 feet of CP equals MBH output divided by (total KW input x 3.412).

HSPF (Heating Seasonal Performance Factor) is the total heating output during a normal annual usage

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ACCESSORIES*

Hard Start Kit (024-31994-000, 024-31995-000) - Provides increased starting torque for areas with low voltage.

TXV Kits - 1TV09 series thermal expansion valves precisely meter refrigerant for optimum performance.

Compressor Discharge Temperature Sensor (2SN02700124) - Adds an additional safety for improved compressor reliability and diagnostics. Compatible only with 13 SEER and higher heat pumps.

Bonnet Sensor (2SB13700124) - The bonnet sensor is used to sense plenum temperature, and is optional with a gas or oil back-up heat source. Compatible only with 13 SEER and higher heat pumps.

Dehumidistat (2HU16700124) - Provides increased dehumidification when matched with variable speed furnace or air handler.

Heat Pump Risers - (526-35389-000, 526-35390-000, 526-35391-000) - 3", 6", or 12" risers mount easily in composite base pan recesses, ensuring the unit stays clear of snow and ice build-up in harsh winter weather.

Room Thermostats - A wide selection of matching thermostats is available to provide features required for any installation.

2H/1C, manual changeover electronic non-programmable thermostat.

3H/2C, non-programmable digital thermostat.

3H/2C, auto/manual changeover, electronic programmable, 7-day, thermostat.

* For the most current accessory information, refer to the price book or consult factroy.

SOUND POWER RATINGS*

UNIT MODEL	(dBA)	
	Cooling	Heating
018	65	66
024	70	70
030	70	71
036	71	72
042	74	74
048	74	75
060	74	75

* Rated in accordance with ARI 270-95 Standards.

COLOR GRILLES

CHOICE OF SEVERAL COLOR COIL GRILLES TO COMPLIMENT ANY HOME.		
Color Grill	Color Description	
1CP0126	Terra Cotta	018
1CP0130	Terra Cotta	024, 030
1CP0136	Terra Cotta	036, 042, 048, 060
1CP0226	Jet Black	018
1CP0230	Jet Black	024, 030
1CP0236	Jet Black	036, 042, 048, 060
1CP0326	Stone	018
1CP0330	Stone	024, 030
1CP0336	Stone	036, 042, 048, 060
1CP0426	Bermuda	018
1CP0430	Bermuda	024, 030
1CP0436	Bermuda	036, 042, 048, 060
1CP0526	Gunmetal	018
1CP0530	Gunmetal	024, 030
1CP0536	Gunmetal	036, 042, 048, 060
1CP0626	Chocolate	018
1CP0630	Chocolate	024, 030
1CP0636	Chocolate	036, 042, 048, 060

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COOLING PERFORMANCE DATA																
AIR CONDITIONER MODEL NO.		**YZB01811**														
INDOOR COIL MODEL NO.		**FC/MC/PC/UC18**														
CONDENSING ENTERING AIR TEMPERATURE	IDCFM	450					600					750				
	ID DB (°F)	80	80	75	80	80	80	80	75	80	80	80	80	75	80	80
	ID WB (°F)	57	62	62	67	72	57	62	62	67	72	57	62	62	67	72
65	T.C.	14.4	17.2	16.4	18.9	21.3	16.8	19.1	18.1	20.7	22.2	19.2	20.9	19.8	22.6	23.1
	S.C.	14.5	12.8	10.6	11.1	9.0	16.9	15.4	12.7	13.1	10.1	19.4	18.1	14.9	15.1	11.2
	KW	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
75	T.C.	13.9	16.5	15.8	18.2	20.2	16.0	18.1	17.4	19.8	21.1	18.2	19.8	18.9	21.5	22.0
	S.C.	14.0	12.4	10.3	10.7	8.6	16.1	14.9	12.5	12.7	9.7	18.3	17.4	14.6	14.7	10.8
	KW	1.3	1.3	1.3	1.3	1.2	1.3	1.3	1.3	1.3	1.2	1.3	1.3	1.3	1.2	1.2
85	T.C.	13.3	15.7	15.3	17.4	19.0	15.2	17.2	16.7	18.9	19.9	17.1	18.6	18.1	20.4	20.8
	S.C.	13.4	12.1	10.1	10.4	8.1	15.3	14.4	12.2	12.4	9.3	17.2	16.8	14.2	14.3	10.4
	KW	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
95	T.C.	12.7	14.9	14.7	16.7	17.9	14.4	16.2	15.9	18.0	18.8	16.1	17.5	17.2	19.3	19.7
	S.C.	12.8	11.8	9.9	10.1	7.7	14.5	13.9	11.9	12.0	8.9	16.1	16.1	13.9	13.9	10.0
	KW	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
105	T.C.	12.2	14.1	13.8	15.7	16.9	13.8	15.5	14.9	16.9	17.7	15.4	16.8	16.1	18.1	18.5
	S.C.	12.3	11.5	9.6	9.7	7.3	13.9	13.5	11.4	11.5	8.4	15.4	15.5	13.3	13.4	9.5
	KW	1.9	1.9	1.8	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8
115	T.C.	11.7	13.4	12.9	14.7	15.9	13.2	14.8	13.9	15.8	16.6	14.7	16.1	15.0	16.9	17.3
	S.C.	11.8	11.3	9.2	9.3	7.0	13.3	13.0	11.0	11.1	8.0	14.8	14.8	12.7	12.9	9.0
	KW	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
125	T.C.	11.2	12.7	11.9	13.8	14.8	12.6	14.1	12.9	14.7	15.5	14.1	15.5	13.9	15.7	16.1
	S.C.	11.3	11.0	8.9	8.9	6.6	12.7	12.6	10.5	10.6	7.5	14.1	14.2	12.2	12.3	8.4
	KW	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
NOTE: ALL CAPACITIES INCLUDE INDOOR FAN HEAT AT 1250 BTUH/1000 CFM.																

Multipliers for determining the performance with other indoor sections.

NOTE: For dry bulb temperatures different than those listed (between 73-87 F), sensible capacity increases by 1060 BTUH per 1000 CFM per degree above the listed temperature and decreases by 1060 BTUH per 1000 CFM per degree below the listed temperature.

Air Handler	Coil	T.C.	S.C.	KW
MA08B	FC/MC18B	1.00	1.00	1.00
MV12B	FC/MC18B	0.97	0.98	0.96
AHP18	–	1.00	1.00	1.00
AV24	–	1.00	0.98	0.96
F*FP024	–	0.99	1.00	1.00
–	HC18	1.00	1.00	1.00
–	HD24	1.00	1.00	1.00

Variable Speed Furnace	Coil	T.C.	S.C.	KW
PV8*A12	FC/MC/PC18A	1.02	0.97	1.07
PV9*A12	FC/MC/PC18A	1.01	0.97	1.07
P(C,V)9*B12	FC/MC/PC18B	1.01	0.97	1.07

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COOLING PERFORMANCE DATA																
OUTDOOR UNIT MODEL NO.		YZB02411														
INDOOR COIL MODEL NO.		AHP24														
CONDENSER ENTERING AIR TEMPERATURE	ID CFM	600					800					1000				
	ID DB (°F)	80	80	75	80	80	80	80	75	80	80	80	80	75	80	80
	ID WB (°F)	57	62	62	67	72	57	62	62	67	57	57	62	62	67	72
65	T.C.	21.7	24.5	23.6	27.4	29.9	24.0	25.4	24.8	28.4	30.8	26.4	26.3	26.0	29.5	31.7
	S.C.	21.9	20.9	16.6	17.8	14.0	24.3	23.9	19.3	19.9	15.6	26.7	24.3	22.0	22.0	17.2
	K.W.	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
75	T.C.	20.9	23.1	22.3	25.5	28.0	23.1	24.2	23.4	26.6	28.9	25.3	25.4	24.5	27.6	29.9
	S.C.	21.1	19.9	15.9	16.6	13.3	23.4	22.8	18.3	18.9	14.8	25.6	25.7	20.8	21.2	16.4
	K.W.	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
85	T.C.	20.2	21.7	21.1	23.6	26.1	22.2	23.1	22.0	24.7	27.1	24.3	24.5	23.0	25.8	28.1
	S.C.	20.4	18.9	15.1	15.5	12.5	22.4	21.7	17.4	18.0	14.1	24.5	24.5	19.6	20.4	15.6
	K.W.	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
95	T.C.	19.5	20.2	19.8	21.7	24.1	21.4	21.9	20.6	22.8	25.2	23.2	23.6	21.4	23.9	26.3
	S.C.	19.6	17.9	14.4	14.3	11.8	21.5	20.6	16.4	17.0	13.3	23.4	23.3	18.5	19.7	14.8
	K.W.	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0
105	T.C.	18.1	18.7	18.3	20.1	22.6	19.8	20.2	19.0	21.1	23.6	21.5	21.8	19.7	22.0	24.5
	S.C.	18.2	17.0	13.7	13.7	11.2	19.9	19.2	15.7	16.2	12.8	21.7	21.4	17.7	18.8	14.3
	K.W.	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
115	T.C.	16.7	17.2	16.8	18.6	21.2	18.2	18.6	17.4	19.4	21.9	19.8	20.0	18.0	20.2	22.7
	S.C.	16.8	16.1	13.0	13.0	10.7	18.4	17.8	15.0	15.4	12.2	20.0	19.5	17.0	17.9	13.8
	K.W.	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
125	T.C.	15.3	15.7	15.3	17.1	19.7	16.7	17.0	15.8	17.7	20.3	18.1	18.3	16.3	18.4	20.9
	S.C.	15.4	15.2	12.4	12.3	10.2	16.9	16.4	14.3	14.7	11.7	18.3	17.7	16.3	17.0	13.3
	K.W.	3.0	3.1	3.1	3.1	3.0	3.0	3.1	3.1	3.1	3.0	3.0	3.1	3.1	3.1	3.0
NOTE: ALL CAPACITIES ARE NET (KBTUH) WITH INDOOR FAN HEAT ALREADY DEDUCTED AT 1250 BTUH/1000 CFM.																

Multipliers for determining the performance with other indoor sections.

NOTE: For dry bulb temperatures different than those listed (between 73-87 F), sensible capacity increases by 1060 BTUH per 1000 CFM per degree above the listed temperature and decreases by 1060 BTUH per 1000 CFM per degree below the listed temperature.

Air Handler	Coil	T.C.	S.C.	KW
MA08B	FC/MC24B	1.00	1.00	1.00
MA08B	FC/MC30B	1.00	1.00	1.00
MV12B	FC/MC24B	1.03	1.02	0.96
MV12B	FC/MC30B	1.03	1.02	0.96
AV24	–	1.03	1.02	0.96
F*FP030	–	1.00	1.00	1.00
–	FC/MC/PC/UC24	1.00	1.00	1.00
–	FC/MC/PC/UC30	1.00	1.00	1.00
–	HC30	1.00	1.00	1.00
–	HD24	0.98	1.06	1.00

Variable Speed Furnace	Coil	T.C.	S.C.	KW
PV8*A12	FC/MC/PC24A	1.00	0.96	1.03
PV9*A12	FC/MC/PC24A	1.00	0.96	1.07
PV8*A12	FC/MC/PC30A	1.00	0.96	1.03
PV9*A12	FC/MC/PC30A	1.00	0.96	1.07

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COOLING PERFORMANCE DATA																
OUTDOOR UNIT MODEL NO.		**YZB03011**														
INDOOR COIL MODEL NO.		**FC/MC/PC/UC36**														
CONDENSER ENTERING AIR TEMPERATURE	ID CFM	800					1000					1200				
	ID DB (°F)	80	80	75	80	80	80	80	75	80	80	80	80	75	80	80
	ID WB (°F)	57	62	62	67	72	57	62	62	67	57	57	62	62	67	72
65	T.C.	27.1	29.1	29.2	33.5	37.3	29.0	30.7	30.7	34.8	38.8	31.0	32.2	32.2	36.1	40.2
	S.C.	26.7	23.3	20.0	20.6	16.9	28.7	26.6	22.6	23.0	18.3	30.7	29.9	25.1	25.3	19.7
	K.W.	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
75	T.C.	26.2	27.9	27.8	31.7	35.7	28.1	29.3	29.1	33.0	37.0	29.9	30.7	30.5	34.3	38.2
	S.C.	25.9	22.9	19.3	19.9	16.2	27.7	26.0	21.7	22.3	17.6	29.6	29.0	24.1	24.7	19.1
	K.W.	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
85	T.C.	25.4	26.6	26.3	29.9	34.1	27.1	27.9	27.5	31.2	35.2	28.8	29.1	28.7	32.5	36.2
	S.C.	25.1	22.6	18.5	19.1	15.6	26.8	25.3	20.8	21.7	17.0	28.4	28.1	23.2	24.2	18.4
	K.W.	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
95	T.C.	24.5	25.4	24.8	28.1	32.6	26.1	26.5	25.9	29.4	33.4	27.7	27.6	27.0	30.7	34.2
	S.C.	24.3	22.3	17.7	18.4	14.9	25.8	24.7	19.9	21.0	16.4	27.3	27.2	22.2	23.6	17.8
	K.W.	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
105	T.C.	23.1	23.7	23.4	26.3	30.3	24.5	24.8	24.3	27.4	30.4	26.0	26.0	25.2	28.4	30.4
	S.C.	22.9	21.4	17.2	17.8	14.2	24.3	23.5	19.4	20.2	16.9	25.7	25.6	21.6	22.7	19.5
	K.W.	3.1	3.1	3.1	3.0	3.0	3.1	3.1	3.1	3.0	3.0	3.1	3.0	3.1	3.0	3.0
115	T.C.	21.7	22.0	21.9	24.6	28.2	23.0	23.2	22.6	25.4	27.4	24.3	24.4	23.4	26.1	26.7
	S.C.	21.5	20.6	16.8	17.2	13.5	22.8	22.4	18.9	19.5	17.4	24.0	24.1	21.1	21.8	21.2
	K.W.	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
125	T.C.	20.3	20.4	20.5	22.9	26.0	21.5	21.6	21.0	23.4	24.5	22.7	22.9	21.6	23.9	23.1
	S.C.	20.1	19.8	16.4	16.5	12.9	21.3	21.2	18.4	18.8	17.9	22.4	22.7	20.5	21.0	22.9
	K.W.	3.8	3.8	3.8	3.8	3.7	3.8	3.8	3.8	3.8	3.7	3.8	3.8	3.8	3.8	3.7
NOTE: ALL CAPACITIES ARE NET (KBTUH) WITH INDOOR FAN HEAT ALREADY DEDUCTED AT 1250 BTUH/1000 CFM.																

Multipliers for determining the performance with other indoor sections.

NOTE: For dry bulb temperatures different than those listed (between 73-87 F), sensible capacity increases by 1060 BTUH per 1000 CFM per degree above the listed temperature and decreases by 1060 BTUH per 1000 CFM per degree below the listed temperature.

Air Handler	Coil	T.C.	S.C.	KW
MA12B	FC/MC36B	1.00	1.00	1.00
MV12B	FC/MC36B	0.99	1.00	0.96
MV16C	FC/MC36C	0.99	1.00	0.96
AHP30	–			
AHP36	–	1.00	0.99	1.00
F2FP036	–	1.01	1.00	1.00
AV36	–	1.03	1.00	0.96
–	HC36	1.01	0.99	1.00
–	HD36	1.01	1.02	1.00

Variable Speed Furnace	Coil	T.C.	S.C.	KW
PV8*A12	FC/MC/PC36A	1.02	0.98	1.01
PV9*A12	FC/MC/PC36A	1.01	0.97	1.01
PV8*B16	FC/MC/PC36B	1.02	0.98	1.03
P(C,V)9*B12	FC/MC/PC36B	1.01	0.97	1.01
PV8*C16	FC/MC/PC36C	1.02	0.98	1.03
P(C,V)9*C16	FC/MC/PC36C	1.02	0.98	1.03

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COOLING PERFORMANCE DATA																
OUTDOOR UNIT MODEL NO.		YZB03611														
INDOOR COIL MODEL NO.		FC/MC/PC/UC36														
CONDENSER ENTERING AIR TEMPERATURE	ID CFM	1000					1200					1400				
	ID DB (°F)	80	80	75	80	80	80	80	75	80	80	80	80	75	80	80
	ID WB (°F)	57	62	62	67	72	57	62	62	67	57	57	62	62	67	72
65	T.C.	33.4	35.6	36.5	41.1	44.1	35.4	36.5	37.1	41.6	44.5	37.4	37.5	37.7	42.1	44.9
	S.C.	33.8	31.2	26.2	26.6	20.9	35.8	34.2	28.4	28.9	22.5	37.8	37.1	30.7	31.3	24.0
	K.W.	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
75	T.C.	31.9	33.9	34.4	39.0	42.1	33.7	34.9	35.0	39.4	42.4	35.5	35.9	35.5	39.8	42.7
	S.C.	32.3	30.4	25.4	25.7	20.2	34.1	33.1	27.6	28.0	21.7	35.9	35.8	29.8	30.3	23.2
	K.W.	2.5	2.5	2.5	2.5	2.6	2.5	2.5	2.5	2.5	2.6	2.5	2.5	2.5	2.6	2.6
85	T.C.	30.4	32.2	32.4	36.9	40.0	32.0	33.2	32.8	37.2	40.3	33.5	34.3	33.3	37.5	40.6
	S.C.	30.8	29.5	24.6	24.8	19.6	32.4	32.0	26.7	27.0	21.0	33.9	34.4	28.9	29.3	22.5
	K.W.	2.8	2.8	2.8	2.9	2.9	2.8	2.8	2.8	2.9	2.9	2.8	2.8	2.9	2.9	2.9
95	T.C.	29.0	30.4	30.3	34.8	38.0	30.3	31.5	30.6	35.0	38.2	31.6	32.7	31.0	35.2	38.4
	S.C.	29.3	28.7	23.8	23.9	18.9	30.7	30.8	25.9	26.1	20.3	32.0	33.0	28.0	28.3	21.7
	K.W.	3.1	3.1	3.1	3.2	3.2	3.1	3.1	3.2	3.2	3.2	3.1	3.1	3.2	3.2	3.2
105	T.C.	27.6	28.9	28.2	32.0	35.1	28.7	29.7	28.5	32.2	35.3	29.9	30.6	28.7	32.4	35.5
	S.C.	27.9	26.8	22.6	22.9	18.0	29.1	28.6	24.7	24.9	19.3	30.2	30.5	26.7	26.9	20.6
	K.W.	3.6	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
115	T.C.	26.3	27.3	26.2	29.4	32.4	27.2	28.0	26.3	29.5	32.5	28.2	28.7	26.5	29.7	32.6
	S.C.	26.6	24.9	21.6	21.9	17.1	27.5	26.4	23.5	23.7	18.3	28.5	27.9	25.4	25.5	19.6
	K.W.	4.0	4.0	4.0	4.1	4.1	4.0	4.0	4.0	4.1	4.1	4.0	4.0	4.0	4.1	4.1
125	T.C.	24.9	25.8	24.2	26.7	29.6	25.7	26.3	24.2	26.8	29.7	26.5	26.7	24.2	26.9	29.8
	S.C.	25.2	23.0	20.5	20.9	16.2	26.0	24.2	22.3	22.5	17.3	26.8	25.4	24.1	24.1	18.5
	K.W.	4.5	4.4	4.4	4.5	4.5	4.5	4.4	4.4	4.5	4.5	4.5	4.5	4.5	4.5	4.5
NOTE: ALL CAPACITIES ARE NET (KBTUH) WITH INDOOR FAN HEAT ALREADY DEDUCTED AT 1250 BTUH/1000 CFM.																

Multipliers for determining the performance with other indoor sections

NOTE: For dry bulb temperatures different than those listed (between 73-87 F), sensible capacity increases by 1060 BTUH per 1000 CFM per degree above the listed temperature and decreases by 1060 BTUH per 1000 CFM per degree below the listed temperature.

Air Handler	Coil	T.C.	S.C.	KW
MA12B	FC/MC36B	0.98	0.98	1.00
MV16C	FC/MC36C	1.03	1.03	0.96
AHP42	–	0.98	0.98	1.00
AV/SV36	–			
AV/SV48	–	1.02	1.03	0.96
F2FP036	–	1.00	1.00	1.00
F2FP042	–	1.01	1.00	1.00
–	HC36	1.01	0.98	1.00
–	HD36	0.99	1.00	1.00

Variable Speed Furnace	Coil	T.C.	S.C.	KW
PV8*A12	FC/MC/PC36A	0.99	0.92	1.02
PV9*A12	FC/MC/PC36A	0.98	0.92	1.02
PV8*B16	FC/MC/PC36B	0.99	0.92	1.03
P(C,V)9*B12	FC/MC/PC36B	0.98	0.92	1.02
PV8*C16	FC/MC/PC36C	0.99	0.92	1.03
PV8*C20	FC/MC/PC36C	0.99	0.92	1.03
P(C,V)9*C16	FC/MC/PC36C	0.99	0.92	1.03
P(C,V)9*C20	FC/MC/PC36C	0.99	0.92	1.03

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COOLING PERFORMANCE DATA																
OUTDOOR UNIT MODEL NO.		**YZB04211**														
INDOOR COIL MODEL NO.		**FC/MC/PC/UC48**														
CONDENSER ENTERING AIR TEMPERATURE	ID CFM	1200					1400					1600				
	ID DB (°F)	80	80	75	80	80	80	80	75	80	80	80	80	75	80	80
	ID WB (°F)	57	62	62	67	72	57	62	62	67	57	57	62	62	67	72
65	T.C.	41.7	43.4	41.3	47.3	50.7	44.2	44.8	42.6	48.5	50.4	46.8	46.3	44.0	49.8	50.1
	S.C.	38.3	36.4	31.1	30.9	24.9	40.5	40.1	33.1	33.6	26.0	42.8	43.8	35.0	36.3	27.0
	K.W.	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
75	T.C.	40.0	41.2	39.4	44.8	47.5	42.3	42.8	40.5	46.0	47.5	44.7	44.4	41.7	47.2	47.4
	S.C.	36.7	35.5	29.9	29.9	23.4	38.8	38.5	31.9	32.5	24.6	40.8	41.6	34.0	35.0	25.9
	K.W.	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.0
85	T.C.	38.3	39.1	37.5	42.4	44.4	40.4	40.8	38.4	43.5	44.6	42.5	42.6	39.3	44.6	44.8
	S.C.	35.2	34.5	28.6	29.0	21.9	37.0	37.0	30.8	31.4	23.3	38.8	39.5	33.0	33.8	24.7
	K.W.	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
95	T.C.	36.7	36.9	35.6	40.0	41.3	38.5	38.9	36.3	41.0	41.7	40.4	40.8	37.0	42.0	42.1
	S.C.	33.6	33.5	27.3	28.0	20.4	35.2	35.4	29.7	30.3	21.9	36.8	37.3	32.0	32.6	23.5
	K.W.	3.6	3.6	3.6	3.6	3.7	3.7	3.6	3.6	3.6	3.7	3.7	3.6	3.6	3.6	3.7
105	T.C.	35.5	34.9	33.2	37.5	38.9	36.3	36.6	33.8	38.4	39.3	37.1	38.4	34.5	39.3	39.7
	S.C.	32.5	31.7	26.3	27.1	19.9	33.2	33.4	28.3	29.4	21.5	33.9	35.1	30.4	31.6	23.0
	K.W.	4.2	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
115	T.C.	34.4	33.0	30.9	35.0	36.5	34.2	34.5	31.4	35.8	36.9	34.0	36.0	32.0	36.7	37.3
	S.C.	31.5	30.0	25.2	26.2	19.4	31.2	31.5	27.0	28.4	21.0	31.0	33.0	28.8	30.7	22.6
	K.W.	4.7	4.6	4.6	4.6	4.7	4.6	4.6	4.6	4.7	4.7	4.6	4.7	4.6	4.7	4.7
125	T.C.	33.3	31.0	28.6	32.6	34.1	32.1	32.3	29.1	33.3	34.5	30.8	33.6	29.5	34.0	34.9
	S.C.	30.4	28.3	24.2	25.2	19.0	29.3	29.5	25.8	27.5	20.5	28.1	30.8	27.3	29.8	22.1
	K.W.	5.1	5.1	5.1	5.1	5.2	5.1	5.1	5.1	5.1	5.2	5.1	5.2	5.1	5.2	5.2
NOTE: ALL CAPACITIES ARE NET (KBTUH) WITH INDOOR FAN HEAT ALREADY DEDUCTED AT 1250 BTUH/1000 CFM.																

Multipliers for determining the performance with other indoor sections.

NOTE: For dry bulb temperatures different than those listed (between 73-87 F), sensible capacity increases by 1060 BTUH per 1000 CFM per degree above the listed temperature and decreases by 1060 BTUH per 1000 CFM per degree below the listed temperature.

Air Handler	Coil	T.C.	S.C.	KW
MA16C	FC/MC48C	1.00	1.00	1.00
MA14D	FC/MC48D	1.00	1.00	1.00
MA16C	FC60C	1.00	1.00	1.00
MV16C	FC/MC48C	1.02	1.02	0.96
MV20D	FC/MC48D	1.02	1.02	0.96
AHP/SHP48	–	1.00	1.00	1.00
AV/SV48	–	1.01	1.02	0.96
–	HC42	0.98	0.96	1.00
–	HD48	0.98	0.98	1.00

Variable Speed Furnace	Coil	T.C.	S.C.	KW
PV8*C16	FC/MC/PC48C	1.00	0.90	1.01
PV8*C20	FC/MC/PC48C	1.00	0.90	1.03
P(C,V)9*C16	FC/MC/PC48C	1.00	0.90	1.03
P(C,V)9*C20	FC/MC/PC48C	1.00	0.90	1.01
P(C,V)9*D20	FC/MC/PC48D	1.00	0.90	1.03

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COOLING PERFORMANCE DATA																
OUTDOOR UNIT MODEL NO.		YZB04811														
INDOOR COIL MODEL NO.		FC/MC/PC/UC60														
CONDENSER ENTERING AIR TEMPERATURE	ID CFM	1400					1600					1800				
	ID DB (°F)	80	80	75	80	80	80	80	75	80	80	80	80	75	80	80
	ID WB (°F)	57	62	62	67	72	57	62	62	67	57	57	62	62	67	72
65	T.C.	49.5	49.2	48.3	52.5	56.2	51.1	49.8	48.8	53.3	56.5	52.7	50.5	49.3	54.0	56.9
	S.C.	45.3	42.7	35.3	35.1	27.3	46.5	44.4	37.6	37.4	28.8	47.7	46.1	39.9	39.8	30.2
	K.W.	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
75	T.C.	46.0	46.5	45.6	50.2	53.6	47.7	47.4	46.2	50.8	53.9	49.3	48.2	46.9	51.5	54.2
	S.C.	43.1	41.0	34.1	34.2	26.5	44.4	43.0	36.4	36.5	27.9	45.8	45.1	38.8	38.8	29.3
	K.W.	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3
85	T.C.	42.6	43.9	42.8	47.9	51.1	44.2	45.0	43.6	48.4	51.2	45.9	46.0	44.4	49.0	51.4
	S.C.	40.9	39.2	32.8	33.4	25.7	42.4	41.6	35.3	35.6	27.1	43.9	44.0	37.7	37.9	28.4
	K.W.	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.7
95	T.C.	39.1	41.2	40.1	45.6	48.5	40.8	42.5	41.0	46.0	48.6	42.4	43.8	42.0	46.4	48.7
	S.C.	38.8	37.5	31.5	32.5	25.0	40.4	40.2	34.1	34.7	26.3	42.0	42.9	36.6	36.9	27.6
	K.W.	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.1
105	T.C.	36.8	38.7	37.4	42.1	44.9	38.3	40.0	38.2	42.5	44.9	39.8	41.2	38.9	42.9	44.8
	S.C.	36.4	35.9	30.3	31.2	23.8	37.9	38.1	32.5	33.3	25.1	39.3	40.3	34.6	35.5	26.5
	K.W.	4.6	4.6	4.5	4.6	4.6	4.6	4.6	4.5	4.6	4.6	4.6	4.6	4.6	4.6	4.6
115	T.C.	34.5	36.3	34.8	38.8	41.4	35.9	37.5	35.4	39.2	41.2	37.2	38.6	35.9	39.6	41.1
	S.C.	34.2	34.3	29.2	29.9	22.7	35.5	36.0	30.9	32.0	24.0	36.8	37.7	32.6	34.1	25.4
	K.W.	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
125	T.C.	32.3	33.9	32.2	35.5	37.9	33.5	35.0	32.6	35.8	37.6	34.6	36.1	32.9	36.2	37.3
	S.C.	31.9	32.7	28.0	28.6	21.5	33.1	33.9	29.3	30.6	22.9	34.3	35.2	30.6	32.7	24.3
	K.W.	5.7	5.6	5.6	5.6	5.6	5.7	5.6	5.6	5.6	5.7	5.7	5.6	5.6	5.6	5.7
NOTE: ALL CAPACITIES ARE NET (KBTUH) WITH INDOOR FAN HEAT ALREADY DEDUCTED AT 1250 BTUH/1000 CFM.																

Multipliers for determining the performance with other indoor sections.

NOTE: For dry bulb temperatures different than those listed (between 73-87 F), sensible capacity increases by 1060 BTUH per 1000 CFM per degree above the listed temperature and decreases by 1060 BTUH per 1000 CFM per degree below the listed temperature.

Air Handler	Coil	T.C.	S.C.	KW
MA20D	FC/MC60D	1.00	1.00	1.00
MA20D	MC61	1.01	1.02	1.00
MV20D	FC/MC60D	1.02	1.02	1.00
MV20D	FC60C	1.01	1.01	1.00
MV20D	MC61D	1.03	1.03	1.00
AHP/SHP48	–	1.00	0.96	1.00
AHP/SHP60	–	1.00	0.96	1.00
AV/SV48	–	1.01	1.01	1.00
F*FV060	–	1.01	0.98	1.00
–	HC60	1.00	0.98	1.00
–	HD60	1.00	0.97	1.00
–	MC61	1.01	1.02	1.00

Variable Speed Furnace	Coil	T.C.	S.C.	KW
P(C,V)9*D20	FC/MC/PC60D	1.00	0.93	1.01
P(C,V)9*D20	MC61D	1.01	0.94	1.01

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COOLING PERFORMANCE DATA																
OUTDOOR UNIT MODEL NO.		**YZB06011**														
INDOOR COIL MODEL NO.		**FC/MC/PC/UC60**														
CONDENSER ENTERING AIR TEMPERATURE	ID CFM	1600					1800					2000				
	ID DB (°F)	80	80	75	80	80	80	80	75	80	80	80	80	75	80	80
	ID WB (°F)	57	62	62	67	72	57	62	62	67	57	57	62	62	67	72
65	T.C.	56.1	58.8	57.7	63.9	68.4	57.3	59.7	59.3	65.2	68.0	58.6	60.5	61.0	66.4	67.6
	S.C.	53.3	50.1	41.5	41.6	32.1	56.2	53.6	44.4	44.3	35.3	58.0	57.1	47.3	47.1	38.5
	K.W.	3.5	3.5	3.5	3.5	3.6	3.5	3.5	3.5	3.5	3.6	3.5	3.5	3.5	3.5	3.6
75	T.C.	53.7	55.5	54.6	60.7	65.0	55.1	56.5	55.9	61.8	65.1	56.6	57.5	57.2	62.9	65.2
	S.C.	50.9	48.6	40.2	40.4	31.3	53.5	51.9	42.9	43.1	34.1	56.0	55.1	45.5	45.9	36.8
	K.W.	4.0	4.0	4.0	4.0	4.1	4.0	4.0	4.0	4.0	4.1	4.0	4.0	4.0	4.0	4.1
85	T.C.	51.3	52.2	51.6	57.4	61.7	52.9	53.4	52.5	58.4	62.2	54.5	54.6	53.4	59.3	62.8
	S.C.	48.5	47.1	38.9	39.2	30.5	50.7	50.1	41.4	41.9	32.8	52.9	53.1	43.8	44.6	35.1
	K.W.	4.5	4.5	4.5	4.5	4.6	4.5	4.5	4.5	4.5	4.6	4.5	4.5	4.5	4.5	4.6
95	T.C.	49.0	48.9	48.6	54.2	58.4	50.7	50.3	49.1	55.0	59.4	52.5	51.6	49.6	55.8	60.3
	S.C.	46.0	45.6	37.6	38.0	29.7	47.9	48.4	39.8	40.7	31.5	49.8	51.1	42.1	43.4	33.3
	K.W.	5.0	4.9	4.9	5.0	5.1	5.0	5.0	4.9	5.0	5.1	5.0	5.0	5.0	5.0	5.1
105	T.C.	46.2	46.1	44.9	50.5	54.1	47.8	47.3	45.4	51.2	55.0	49.4	48.5	45.9	52.0	56.0
	S.C.	43.3	43.3	35.9	36.6	28.3	45.1	45.4	38.0	39.2	30.1	46.9	47.5	40.0	41.8	31.8
	K.W.	5.6	5.6	5.6	5.7	5.8	5.6	5.6	5.6	5.7	5.8	5.7	5.7	5.6	5.7	5.8
115	T.C.	43.5	43.4	41.3	46.8	49.9	44.9	44.4	41.8	47.5	50.8	46.4	45.4	42.3	48.2	51.8
	S.C.	40.6	41.0	34.2	35.3	26.9	42.3	42.5	36.2	37.7	28.6	44.0	44.0	38.1	40.2	30.4
	K.W.	6.3	6.3	6.2	6.3	6.4	6.3	6.3	6.3	6.3	6.4	6.3	6.3	6.3	6.4	6.4
125	T.C.	40.8	40.6	37.7	43.2	45.7	42.1	41.5	38.2	43.9	46.6	43.4	42.3	38.8	44.5	47.5
	S.C.	37.9	38.7	32.6	34.0	25.5	39.5	39.6	34.3	36.3	27.2	41.1	40.5	36.1	38.6	28.9
	K.W.	6.9	6.9	6.9	7.0	7.1	6.9	7.0	6.9	7.0	7.1	7.0	7.0	6.9	7.0	7.1
NOTE: ALL CAPACITIES ARE NET (KBTUH) WITH INDOOR FAN HEAT ALREADY DEDUCTED AT 1250 BTUH/1000 CFM.																

Multipliers for determining the performance with other indoor sections.

NOTE: For dry bulb temperatures different than those listed (between 73-87 F), sensible capacity increases by 1060 BTUH per 1000 CFM per degree above the listed temperature and decreases by 1060 BTUH per 1000 CFM per degree below the listed temperature.

Air Handler	Coil	T.C.	S.C.	KW
MA20D	MC61	1.00	1.00	1.00
MV20D	FC/MC60D	0.98	0.98	1.00
MV20D	MC61D	0.99	0.99	1.00
AHP/SHP60	–	1.00	0.98	1.00
AV/SV60	–	0.98	0.98	1.00
F*FV060	–	0.97	0.95	1.00
–	MC61	1.00	1.00	1.00

Variable Speed Furnace	Coil	T.C.	S.C.	KW
P(C,V)9*D20	FC/MC/PC60D	0.96	0.92	1.00
P(C,V)9*D20	MC61D	0.98	0.94	1.00

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HEATING PERFORMANCE DATA										
OUTDOOR UNIT MODEL NO.		YZB01811								
INDOOR COIL MODEL NO.		FC/MC/PC/UC18								
AIR TEMP. ENTERING OUTDOOR UNIT	AIR TEMP. ENTERING INDOOR COIL	ID CFM								
		450			600			750		
		MBTUH	KW	C.O.P.	MBTUH	KW	C.O.P.	MBTUH	KW	C.O.P.
60	60	22.9	1.8	3.7	23.7	1.6	4.3	24.4	1.4	5.0
	70	21.5	2.0	3.1	22.3	1.8	3.6	23.1	1.6	4.2
	80	20.2	2.2	2.6	21.0	2.0	3.0	21.8	1.8	3.6
47	60	20.9	1.8	3.4	21.5	1.6	3.9	22.2	1.4	4.6
	70	19.4	2.0	2.9	20.0	1.8	3.3	20.6	1.6	3.7
	80	17.9	2.1	2.5	18.5	2.0	2.7	19.0	1.8	3.1
40	60	18.7	1.6	3.3	19.4	1.5	3.7	20.1	1.4	4.2
	70	17.0	1.8	2.8	17.8	1.7	3.1	18.7	1.6	3.5
	80	15.3	1.9	2.4	16.3	1.8	2.6	17.2	1.7	2.9
30	60	15.8	1.4	3.4	16.7	1.3	3.7	17.6	1.3	4.1
	70	14.1	1.5	2.7	14.8	1.4	3.0	15.6	1.4	3.3
	80	12.3	1.7	2.2	13.0	1.6	2.4	13.6	1.5	2.7
17	60	12.5	1.4	2.6	13.3	1.3	2.9	14.1	1.3	3.2
	70	10.7	1.5	2.1	11.6	1.5	2.3	12.5	1.4	2.6
	80	9.0	1.6	1.6	9.9	1.6	1.8	10.8	1.5	2.1
10	60	11.5	1.4	2.4	12.0	1.4	2.6	12.5	1.3	2.8
	70	10.0	1.5	1.9	10.5	1.5	2.1	10.9	1.4	2.2
	80	8.6	1.7	1.5	8.9	1.6	1.6	9.2	1.6	1.7
NOTE: ALL CAPACITIES INCLUDE INDOOR FAN HEAT AT 1250 BTUH/1000 CFM.										

Multipliers for determining the performance with other indoor sections.

Air Handler	Coil	T.C.	S.C.	KW
MA08B	FC/MC18B	1.00	0.90	1.00
MV12B	FC/MC18B	1.00	0.85	1.05
AHP18	–	1.00	0.90	1.00
AV24	–	1.00	0.86	1.04
F*FP024	–	1.00	0.99	1.01
–	HC24	1.00	0.89	1.00
–	HD24	1.00	0.89	1.00

Variable Speed Furnace	Coil	T.C.	S.C.	KW
PV8*A12	FC/MC/PC18A	1.00	0.85	1.05
PV9*A12	FC/MC/PC18A	1.00	0.86	1.04
P(C,V)9*B12	FC/MC/PC18B	1.00	0.85	1.05

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HEATING PERFORMANCE DATA										
OUTDOOR UNIT MODEL NO.		YZB02411								
INDOOR COIL MODEL NO.		AHP24								
AIR TEMP. ENTERING OUTDOOR UNIT	AIR TEMP. ENTERING INDOOR COIL	ID CFM								
		600			800			1000		
		MBTUH	KW	C.O.P.	MBTUH	KW	C.O.P.	MBTUH	KW	C.O.P.
60	60	29.0	2.2	3.8	30.7	2.0	4.5	32.5	1.8	5.4
	70	28.2	2.6	3.2	29.7	2.3	3.8	31.2	2.0	4.5
	80	27.5	2.9	2.8	28.7	2.6	3.2	29.8	2.3	3.8
47	60	24.0	2.0	3.5	24.6	1.8	3.9	25.3	1.7	4.4
	70	23.1	2.2	3.1	24.0	2.0	3.4	24.9	1.9	3.9
	80	22.1	2.4	2.7	23.4	2.2	3.0	24.6	2.1	3.5
40	60	21.3	1.9	3.3	21.9	1.7	3.7	22.5	1.6	4.2
	70	20.6	2.1	2.9	21.3	1.9	3.2	22.0	1.8	3.6
	80	20.0	2.3	2.5	20.8	2.2	2.8	21.6	2.0	3.1
30	60	17.1	1.9	2.7	18.0	1.7	3.1	19.0	1.6	3.6
	70	16.6	1.9	2.6	17.4	1.8	2.9	18.2	1.6	3.3
	80	16.1	2.0	2.4	16.7	1.8	2.7	17.3	1.7	3.0
17	60	14.1	1.7	2.4	14.5	1.6	2.7	14.9	1.4	3.0
	70	13.8	1.9	2.2	14.2	1.7	2.4	14.6	1.6	2.6
	80	13.4	2.0	1.9	13.9	1.9	2.1	14.4	1.8	2.3
10	60	12.6	1.6	2.3	12.8	1.5	2.5	13.1	1.4	2.8
	70	12.1	1.9	1.9	12.5	1.7	2.1	12.9	1.6	2.3
	80	11.7	2.1	1.6	12.2	2.0	1.8	12.7	1.8	2.0
NOTE: ALL CAPACITIES INCLUDE INDOOR FAN HEAT AT 1250 BTUH/1000 CFM.										

Multipliers for determining the performance with other indoor sections.

Air Handler	Coil	T.C.	S.C.	KW
MA08B	FC/MC24B	1.00	1.00	1.00
MA08B	FC/MC30B	1.00	1.00	1.00
MV12B	FC/MC24B	0.98	0.98	1.00
MV12B	FC/MC30B	0.98	0.98	1.00
AV24	–	0.97	0.90	1.07
F*FP30	–	0.99	0.99	1.00
–	FC/MC/PC/UC24	1.00	1.00	1.00
–	FC/MC/PC/UC30	1.00	1.00	1.00
–	HC30	1.00	1.00	1.00
–	HD24	1.00	1.00	1.00

Variable Speed Furnace	Coil	T.C.	S.C.	KW
PV8*A12	FC/MC/PC24A	0.97	0.97	1.00
PV8*A12	FC/MC/PC30A	0.97	0.97	1.00
PV8*A12	HC30	0.97	0.97	1.00
PV8*A12	HD24	0.97	0.97	1.00
PV9*A12	FC/MC/PC24A	0.97	0.92	1.05
PV9*A12	FC/MC/PC30A	0.97	0.92	1.05

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HEATING PERFORMANCE DATA										
OUTDOOR UNIT MODEL NO.		YZB03011								
INDOOR COIL MODEL NO.		FC/MC/PC/UC36								
AIR TEMP. ENTERING OUTDOOR UNIT	AIR TEMP. ENTERING INDOOR COIL	ID CFM								
		800			1000			1200		
		MBTUH	KW	C.O.P.	MBTUH	KW	C.O.P.	MBTUH	KW	C.O.P.
60	60	34.3	2.5	4.0	35.3	2.4	4.4	36.3	2.2	4.8
	70	33.3	2.8	3.5	34.3	2.6	3.8	35.3	2.5	4.2
	80	32.3	3.1	3.1	33.3	2.9	3.4	34.3	2.7	3.7
47	60	29.8	2.4	3.6	30.7	2.3	3.9	31.5	2.2	4.3
	70	29.3	2.7	3.2	30.0	2.6	3.4	30.7	2.4	3.7
	80	28.8	3.0	2.8	29.3	2.8	3.1	29.9	2.6	3.3
40	60	27.7	2.4	3.4	28.6	2.3	3.7	29.5	2.2	4.0
	70	27.1	2.7	3.0	27.9	2.6	3.2	28.7	2.4	3.5
	80	26.6	3.0	2.6	27.2	2.8	2.8	27.8	2.7	3.1
30	60	22.3	2.2	2.9	23.7	2.2	3.2	25.1	2.1	3.5
	70	22.0	2.5	2.6	23.3	2.4	2.9	24.6	2.3	3.1
	80	21.7	2.7	2.4	22.9	2.6	2.6	24.1	2.6	2.8
17	60	17.2	2.2	2.3	18.2	2.1	2.5	19.2	2.1	2.7
	70	17.4	2.4	2.1	18.3	2.4	2.3	19.2	2.3	2.4
	80	17.6	2.7	1.9	18.4	2.6	2.1	19.1	2.5	2.2
10	60	16.4	2.1	2.3	17.2	2.1	2.4	18.0	2.1	2.5
	70	15.9	2.4	2.0	16.7	2.3	2.1	17.5	2.3	2.3
	80	15.4	2.6	1.7	16.2	2.6	1.9	17.0	2.5	2.0
NOTE: ALL CAPACITIES INCLUDE INDOOR FAN HEAT AT 1250 BTUH/1000 CFM.										

Multipliers for determining the performance with other indoor sections.

Air Handler	Coil	T.C.	S.C.	KW
MA12B	FC/MC36B	1.00	1.00	1.00
MV12B	FC/MC36B	0.98	0.98	1.00
MV16C	FC/MC36C	0.98	0.98	1.00
AHP30	–			
AHP36	–	1.00	1.00	1.00
AV36	–	0.97	0.91	1.06
F*FP036	–	0.99	0.99	1.00
–	HC36	1.00	1.00	1.00
–	HD36	1.00	1.00	1.00

Variable Speed Furnace	Coil	T.C.	S.C.	KW
PV8*A12	FC/MC/PC36A	0.98	0.98	1.00
PV8*A12	HD36	0.98	0.98	1.00
PV8*B16	FC/MC/PC36B	0.98	0.98	1.00
PV8*B16	HC36	0.98	0.98	1.00
PV8*C16	FC/MC/PC36C	0.98	0.98	1.00
PV9*A12	FC/MC/PC36A	0.98	0.93	1.04
PV9*A12	HD36	0.98	0.96	1.02
P(C,V)9*B12	FC/MC/PC36B	0.98	0.93	1.04
P(C,V)9*C16	FC/MC/PC36C	0.98	0.98	1.00

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HEATING PERFORMANCE DATA										
OUTDOOR UNIT MODEL NO.		YZB03611								
INDOOR COIL MODEL NO.		FC/MC/PC/UC36								
AIR TEMP. ENTERING OUTDOOR UNIT	AIR TEMP. ENTERING INDOOR COIL	ID CFM								
		1000			1200			1400		
		MBTUH	KW	C.O.P.	MBTUH	KW	C.O.P.	MBTUH	KW	C.O.P.
60	60	44.8	3.2	4.1	45.7	3.1	4.4	46.5	2.9	4.7
	70	42.6	3.5	3.6	43.6	3.3	3.8	44.5	3.2	4.1
	80	40.5	3.8	3.2	41.5	3.6	3.4	42.6	3.5	3.6
47	60	38.8	3.1	3.6	38.6	3.0	3.8	38.4	2.8	4.1
	70	36.6	3.4	3.2	37.0	3.2	3.4	37.4	3.1	3.6
	80	34.3	3.7	2.8	35.4	3.5	3.0	36.5	3.4	3.2
40	60	35.0	3.1	3.3	35.4	3.0	3.5	35.9	2.8	3.7
	70	33.4	3.4	2.9	33.9	3.3	3.0	34.4	3.1	3.2
	80	31.8	3.7	2.5	32.4	3.6	2.7	33.0	3.4	2.8
30	60	31.7	3.0	3.1	31.7	2.9	3.2	31.7	2.8	3.3
	70	29.9	3.3	2.7	30.1	3.2	2.8	30.3	3.1	2.9
	80	28.0	3.6	2.3	28.5	3.4	2.4	28.9	3.3	2.5
17	60	25.3	2.9	2.5	25.8	2.8	2.7	26.4	2.7	2.8
	70	23.8	3.1	2.2	24.4	3.1	2.3	25.0	3.0	2.4
	80	22.4	3.3	2.0	23.0	3.3	2.0	23.5	3.3	2.1
10	60	18.2	2.8	1.9	19.7	2.7	2.1	21.3	2.6	2.4
	70	19.2	3.1	1.8	19.4	3.0	1.9	19.7	2.9	2.0
	80	20.1	3.4	1.7	19.1	3.3	1.7	18.1	3.2	1.7
NOTE: ALL CAPACITIES INCLUDE INDOOR FAN HEAT AT 1250 BTUH/1000 CFM.										

Multipliers for determining the performance with other indoor sections.

Air Handler	Coil	T.C.	S.C.	KW
MA12B	FC/MC36B	1.00	0.97	1.00
MV12B	FC/MC36B	1.00	0.97	1.00
AHP42	–	1.00	0.97	1.00
AV/SV36	–			
AV/SV48	–	1.00	0.93	1.04
F*FP036	–	1.00	1.00	1.00
F*FP042	–	1.00	1.00	1.00
–	HC36	1.00	0.97	1.00
–	HD36	1.00	0.97	1.00

Variable Speed Furnace	Coil	T.C.	S.C.	KW
PV8*A12	FC/MC/PC36A	1.00	0.97	1.00
PV8*B16	FC/MC/PC36B	1.00	0.97	1.00
PV8*B16	HC36	1.00	0.97	1.00
PV8*B16	HD36	1.00	0.97	1.00
PV8*C16	FC/MC/PC36C	1.00	0.97	1.00
PV8*C20	FC/MC/PC36C	1.00	0.97	1.00
PV9*A12	FC/MC/PC36A	1.00	0.95	1.01
P(C,V)9*B12	FC/MC/PC36B	1.00	0.95	1.01
P(C,V)9*B12	HC36	1.00	0.97	1.00
P(C,V)9*B12	HD36	1.00	0.97	1.00
P(C,V)9*C16	FC/MC/PC36C	1.00	0.97	1.00
P(C,V)9*C20	FC/MC/PC36C	1.00	0.97	1.00

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HEATING PERFORMANCE DATA										
OUTDOOR UNIT MODEL NO.		YZB04211								
INDOOR COIL MODEL NO.		FC/MC/PC/UC48								
AIR TEMP. ENTERING OUTDOOR UNIT	AIR TEMP. ENTERING INDOOR COIL	ID CFM								
		1200			1400			1600		
		MBTUH	KW	C.O.P.	MBTUH	KW	C.O.P.	MBTUH	KW	C.O.P.
60	60	47.3	2.2	6.3	48.3	2.1	6.7	49.3	2.0	7.2
	70	46.4	2.4	5.6	47.5	2.3	6.0	48.6	2.2	6.4
	80	45.6	2.6	5.0	46.7	2.6	5.4	47.9	2.5	5.7
47	60	44.3	3.9	3.3	45.7	4.0	3.3	47.1	4.1	3.3
	70	42.0	3.4	3.6	43.0	3.4	3.7	44.0	3.5	3.7
	80	39.8	3.0	3.9	40.3	2.9	4.1	40.8	2.8	4.3
40	60	39.9	2.6	4.5	41.6	2.5	4.9	43.3	2.4	5.2
	70	38.3	2.9	3.9	39.8	2.8	4.2	41.3	2.7	4.5
	80	36.8	3.1	3.4	38.0	3.0	3.7	39.3	3.0	3.9
30	60	33.5	2.8	3.5	34.3	2.7	3.7	35.2	2.6	3.9
	70	32.0	3.0	3.1	33.2	3.0	3.3	34.4	2.9	3.5
	80	30.6	3.3	2.7	32.1	3.3	2.9	33.7	3.2	3.1
17	60	29.1	3.0	2.8	29.5	3.0	2.9	29.8	2.9	3.0
	70	28.3	3.4	2.5	28.4	3.3	2.5	28.5	3.2	2.6
	80	27.4	3.7	2.2	27.3	3.6	2.2	27.2	3.5	2.3
10	60	24.1	3.2	2.2	24.9	3.1	2.3	25.8	3.1	2.5
	70	22.6	3.5	1.9	23.1	3.4	2.0	23.6	3.4	2.1
	80	21.2	3.8	1.6	21.3	3.8	1.7	21.3	3.7	1.7
NOTE: ALL CAPACITIES INCLUDE INDOOR FAN HEAT AT 1250 BTUH/1000 CFM.										

Multipliers for determining the performance with other indoor sections.

Air Handler	Coil	T.C.	S.C.	KW
MA14D	FC/MC48D	1.00	0.98	1.00
MA16C	FC/MC48C	1.00	0.98	1.00
MV16C	FC/MC48C	1.00	0.98	1.00
MV20D	FC/MC48D	1.00	0.98	1.00
AHP/SHP48	–	1.00	0.98	1.00
AV/SV48	–	1.00	0.94	1.04
–	HC48	1.00	0.97	1.00
–	HD48	1.00	0.97	1.00

Variable Speed Furnace	Coil	T.C.	S.C.	KW
PV8*C16	FC/MC/PC48C	1.00	0.97	1.00
PV8*C20	FC/MC/PC48C	1.00	0.97	1.00
PV8*C20	HC48	1.00	0.97	1.00
PV8*C20	HD48	1.00	0.97	1.00
P(C,V)9*C16	FC/MC/PC48C	1.00	0.95	1.02
P(C,V)9*C20	FC/MC/PC48C	1.00	0.95	1.02
P(C,V)9*C20	HC48	1.00	0.97	1.00
P(C,V)9*C20	HD48	1.00	0.97	1.00
P(C,V)9*D20	FC/MC/PC48D	1.00	0.95	1.02

http://www.rezine.net

HEATING PERFORMANCE DATA										
OUTDOOR UNIT MODEL NO.		YZB04811								
INDOOR COIL MODEL NO.		FC/MC/PC/UC60								
AIR TEMP. ENTERING OUTDOOR UNIT	AIR TEMP. ENTERING INDOOR COIL	ID CFM								
		1400			1600			1800		
		MBTUH	KW	C.O.P.	MBTUH	KW	C.O.P.	MBTUH	KW	C.O.P.
60	60	59.1	4.9	3.6	59.6	4.7	3.7	60.2	4.5	3.9
	70	61.4	4.4	4.1	61.9	4.2	4.3	62.4	4.1	4.5
	80	63.7	4.0	4.7	64.1	3.8	4.9	64.6	3.7	5.2
47	60	47.3	3.9	3.6	49.6	3.9	3.7	51.8	3.9	3.9
	70	49.4	4.3	3.3	51.0	4.3	3.5	52.6	4.2	3.7
	80	51.5	4.8	3.2	52.4	4.6	3.3	53.3	4.5	3.5
40	60	48.4	4.0	3.6	49.2	3.8	3.8	49.9	3.7	3.9
	70	44.4	4.3	3.0	45.1	4.2	3.1	45.9	4.1	3.2
	80	40.3	4.6	2.6	41.1	4.6	2.6	41.8	4.6	2.7
30	60	36.4	3.8	2.8	39.7	3.8	3.1	42.9	3.8	3.4
	70	33.4	4.2	2.4	36.5	4.2	2.6	39.6	4.2	2.8
	80	30.5	4.6	2.0	33.4	4.6	2.1	36.3	4.6	2.3
17	60	37.0	4.0	2.7	36.1	3.9	2.7	35.2	3.8	2.7
	70	34.4	4.4	2.3	33.2	4.2	2.3	32.0	4.1	2.3
	80	31.8	4.8	2.0	30.3	4.6	1.9	28.8	4.4	1.9
10	60	32.1	3.9	2.4	31.1	3.8	2.4	30.2	3.8	2.4
	70	28.3	4.3	1.9	28.1	4.2	1.9	28.0	4.2	2.0
	80	24.6	4.7	1.5	25.2	4.6	1.6	25.7	4.6	1.7
NOTE: ALL CAPACITIES INCLUDE INDOOR FAN HEAT AT 1250 BTUH/1000 CFM.										

Multipliers for determining the performance with other indoor sections.

Air Handler	Coil	T.C.	S.C.	KW
MA16C	FC60C	1.00	0.96	1.00
MA20D	FC/MC60D	1.00	0.96	1.00
MA20D	MC61D	1.00	0.96	1.00
MV16C	FC/MC60C	1.00	0.94	1.00
MV20D	FC/MC60D	1.00	0.94	1.00
MV20D	MC61D	1.00	0.94	1.00
AHP/SHP48	–	1.00	0.96	1.00
AHP/SHP60	–	1.00	0.96	1.00
AV/SV48	–	1.00	0.92	1.03
F*FV060	–	1.00	0.99	1.00
–	HC60	1.00	0.96	1.00
–	HD60	1.00	0.96	1.00
–	MC61	1.00	0.96	1.00

Variable Speed Furnace	Coil	T.C.	S.C.	KW
PV8*C20	FC/PC60C	1.00	0.94	1.00
PV8*C20	HC60	1.00	0.94	1.00
PV8*C20	HD60	1.00	0.94	1.00
P(C,V)9*C20	FC/PC60C	1.00	0.93	1.00
P(C,V)9*D20	FC/MC/PC60D	1.00	0.93	1.01
P(C,V)9*D20	HC60	1.00	0.94	1.00
P(C,V)9*D20	HD60	1.00	0.94	1.00
P(C,V)9*D20	MC61D	1.00	0.93	1.01

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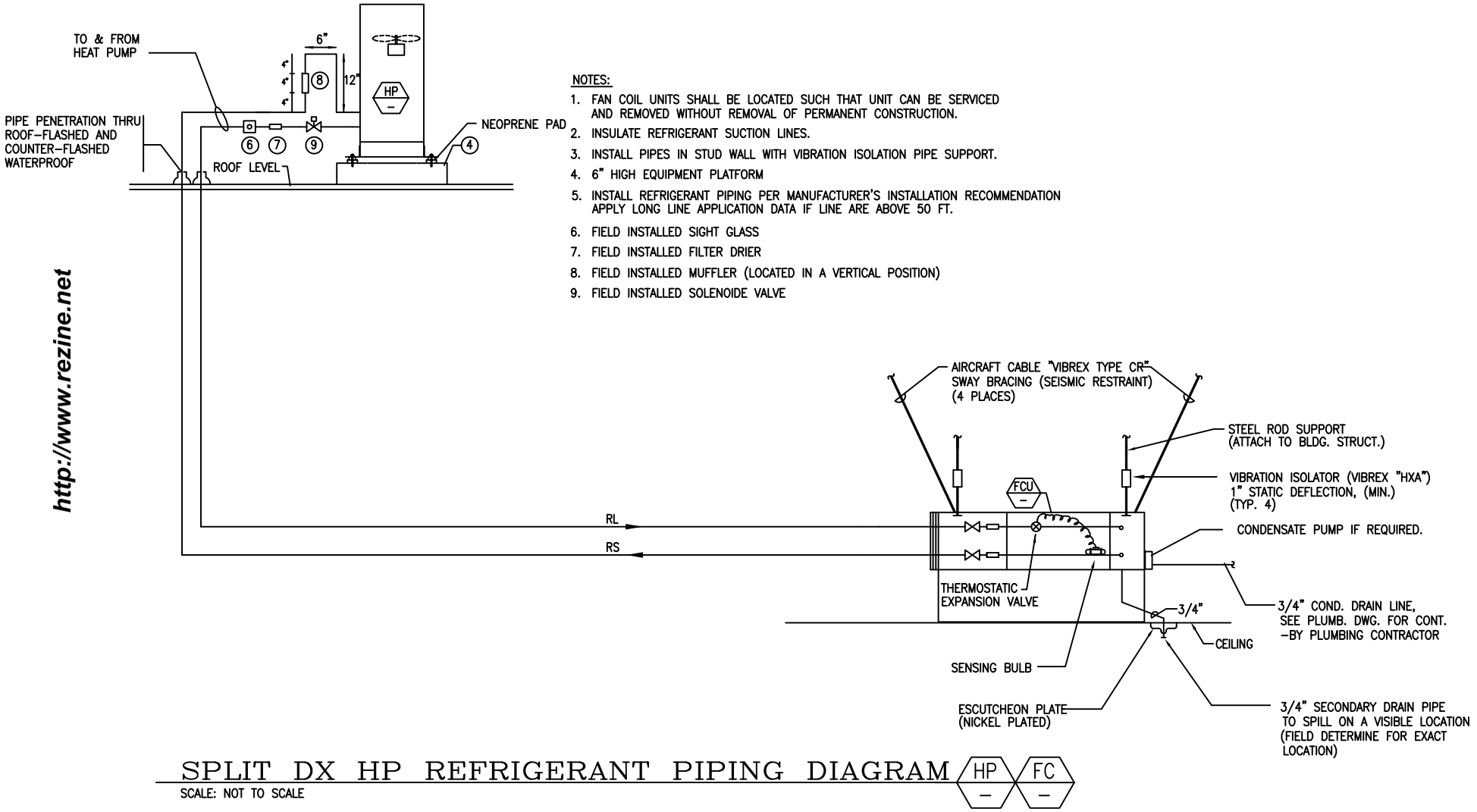
HEATING PERFORMANCE DATA										
OUTDOOR UNIT MODEL NO.		YZB06011								
INDOOR COIL MODEL NO.		FC/MC/PC/UC60								
AIR TEMP. ENTERING OUTDOOR UNIT	AIR TEMP. ENTERING INDOOR COIL	ID CFM								
		1600			1800			2000		
		MBTUH	KW	C.O.P.	MBTUH	KW	C.O.P.	MBTUH	KW	C.O.P.
60	60	71.3	4.7	4.5	70.8	4.5	4.6	70.3	4.4	4.7
	70	68.9	5.2	3.9	69.1	5.0	4.1	69.2	4.8	4.2
	80	66.6	5.6	3.5	67.4	5.5	3.6	68.2	5.3	3.8
47	60	57.9	4.4	3.8	59.0	4.3	4.0	60.0	4.2	4.2
	70	56.8	4.9	3.4	57.5	4.8	3.5	58.2	4.6	3.7
	80	55.8	5.4	3.0	56.0	5.2	3.1	56.3	5.1	3.2
40	60	49.9	4.2	3.4	51.6	4.2	3.6	53.3	4.1	3.8
	70	49.6	4.8	3.1	51.0	4.6	3.2	52.4	4.5	3.4
	80	49.3	5.3	2.7	50.3	5.1	2.9	51.4	5.0	3.0
30	60	43.3	4.1	3.1	42.1	4.0	3.1	40.9	3.8	3.1
	70	43.3	4.6	2.8	40.9	4.4	2.7	38.6	4.3	2.7
	80	43.3	5.1	2.5	39.7	4.9	2.4	36.2	4.7	2.3
17	60	36.5	4.0	2.7	36.7	3.9	2.8	36.9	3.8	2.9
	70	35.1	4.4	2.3	34.6	4.3	2.4	34.1	4.2	2.4
	80	33.8	4.8	2.1	32.5	4.7	2.0	31.2	4.6	2.0
10	60	31.6	3.9	2.4	32.7	3.8	2.5	33.9	3.8	2.6
	70	30.4	4.3	2.1	31.3	4.2	2.2	32.2	4.2	2.3
	80	29.3	4.7	1.8	29.9	4.7	1.9	30.5	4.6	2.0
NOTE: ALL CAPACITIES INCLUDE INDOOR FAN HEAT AT 1250 BTUH/1000 CFM.										

Multipliers for determining the performance with other indoor sections.

Air Handler	Coil	T.C.	S.C.	KW
MA20D	MC61D	1.00	1.00	1.00
MV20D	FC/MC60D	1.00	0.99	1.00
MV20D	MC61D	1.00	0.99	1.00
AHP/SHP60	–	1.00	1.00	1.00
AV/SV60	–	1.00	0.98	1.01
F*FV060	–	1.00	0.99	1.00
–	MC61	1.00	1.00	1.00

Variable Speed Furnace	Coil	T.C.	S.C.	KW
PV8*C20	FC/PC60C	1.00	0.99	1.00
PV8*C20	HC60	1.00	0.99	1.00
PV8*C20	HD60	1.00	0.99	1.00
P(C,V)9*C20	FC/PC60C	0.98	0.96	1.00
P(C,V)9*D20	FC/MC/PC60D	0.98	0.96	1.01
P(C,V)9*D20	MC61D	0.98	0.96	1.01



NOTES:

1. FAN COIL UNITS SHALL BE LOCATED SUCH THAT UNIT CAN BE SERVICED AND REMOVED WITHOUT REMOVAL OF PERMANENT CONSTRUCTION.
2. INSULATE REFRIGERANT SUCTION LINES.
3. INSTALL PIPES IN STUD WALL WITH VIBRATION ISOLATION PIPE SUPPORT.
4. 6" HIGH EQUIPMENT PLATFORM
5. INSTALL REFRIGERANT PIPING PER MANUFACTURER'S INSTALLATION RECOMMENDATION APPLY LONG LINE APPLICATION DATA IF LINE ARE ABOVE 50 FT.
6. FIELD INSTALLED SIGHT GLASS
7. FIELD INSTALLED FILTER DRIER
8. FIELD INSTALLED MUFFLER (LOCATED IN A VERTICAL POSITION)
9. FIELD INSTALLED SOLENOIDE VALVE

SPLIT DX HP REFRIGERANT PIPING DIAGRAM

SCALE: NOT TO SCALE

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R-410a Refrigerant lines and the losses

Unit Nominal Size	Liquid Line is 3/8" Vapor Line Diameters (In. O.D.)	Cooling Capacity Loss (%) Total Equivalent Line Length (ft)									
		Equivalent length. Requires Accessories									
		25'	50'	80'	100'	125'	150'	175'	200'	225'	250'
1.5 Ton	1/2	1	2	3	4	6	7	8	9	10	12
	5/8	0	0	1	1	1	2	2	3	3	3
2 Tons	5/8	0	1	1	2	3	3	4	4	5	6
	3/4	0	0	0	0	1	1	1	1	1	2
	7/8	0	0	0	0	0	0	0	0	0	1
2.5 Tons	5/8	1	2	3	3	4	5	6	7	8	9
	3/4	0	0	1	1	1	2	2	2	3	3
	7/8	0	0	0	0	1	1	1	1	1	1
3 tons	5/8	1	2	4	5	6	7	9	10	11	13
	3/4	0	0	1	1	2	2	3	3	4	4
	7/8	0	0	0	0	1	1	1	1	2	2
3.5 Tons	3/4	0	1	2	2	3	4	4	5	6	6
	7/8	0	0	1	1	1	2	2	2	3	3
	1--1/8	0	0	0	0	0	0	0	0	0	1
4 Tons	3/4	0	1	2	3	4	5	5	6	7	8
	7/8	0	0	1	1	2	2	2	3	3	4
	1--1/8	0	0	0	0	0	0	0	1	1	1
5 Tons	3/4	1	2	4	5	6	7	9	10	11	12
	7/8	0	1	2	2	3	4	4	5	5	6
	1--1/8	0	0	0	1	1	1	1	1	1	2

Required Accessories are Solenoide valve, crankase heater, star capacitor, hard shut off TXV, filter drier.

http://www.rezine.net

R-410a Refrigerant lines and the losses

Unit Nominal Size	Liquid Line is 3/8" Vapor Line Diameters (In. O.D.)	Cooling Capacity Loss (%) Total Equivalent Line Length (ft)									
		Equivalent length. Requires Accessories									
		25'	50'	80'	100'	125'	150'	175'	200'	225'	250'
1.5 Ton	1/2	1	2	3	4	6	7	8	9	10	12
	5/8	0	0	1	1	1	2	2	3	3	3
2 Tons	5/8	0	1	1	2	3	3	4	4	5	6
	3/4	0	0	0	0	1	1	1	1	1	2
	7/8	0	0	0	0	0	0	0	0	0	1
2.5 Tons	5/8	1	2	3	3	4	5	6	7	8	9
	3/4	0	0	1	1	1	2	2	2	3	3
	7/8	0	0	0	0	1	1	1	1	1	1
3 tons	5/8	1	2	4	5	6	7	9	10	11	13
	3/4	0	0	1	1	2	2	3	3	4	4
	7/8	0	0	0	0	1	1	1	1	2	2
3.5 Tons	3/4	0	1	2	2	3	4	4	5	6	6
	7/8	0	0	1	1	1	2	2	2	3	3
	1--1/8	0	0	0	0	0	0	0	0	0	1
4 Tons	3/4	0	1	2	3	4	5	5	6	7	8
	7/8	0	0	1	1	2	2	2	3	3	4
	1--1/8	0	0	0	0	0	0	0	1	1	1
5 Tons	3/4	1	2	4	5	6	7	9	10	11	12
	7/8	0	1	2	2	3	4	4	5	5	6
	1--1/8	0	0	0	1	1	1	1	1	1	2

Required Accessories are Solenoide valve, crankase heater, star capacitor, hard shut off TXV, filter drier.

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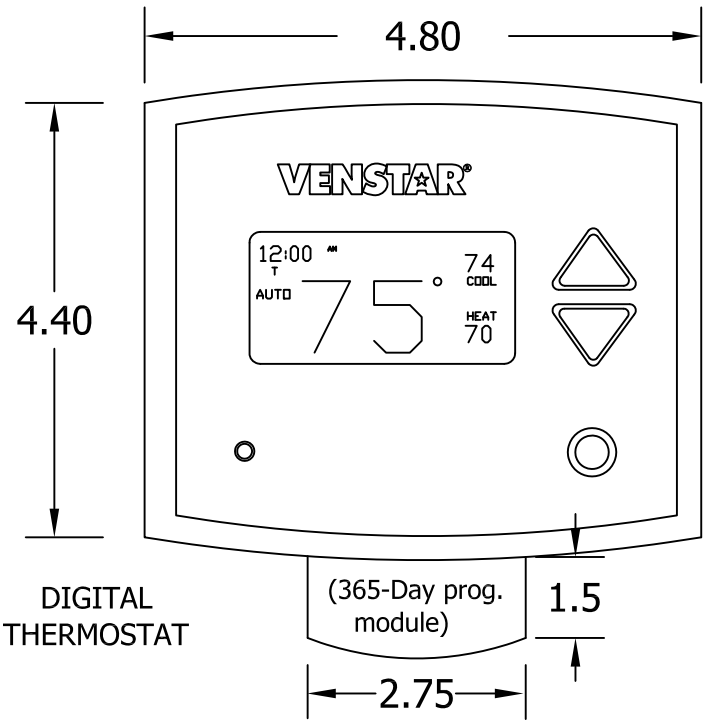
VENSTAR® COMMERCIAL THERMOSTAT

MODEL NO. T2950



365-DAY
PROGRAMMABLE

UP TO 3-HEAT
& 2-COOL

HEAT
COOL & HEAT
PUMP

TITLE-24 COMPLIANT

STANDARD FEATURES:

- **365-day programmable (up to 10 years, includes full calendar with preprogrammed holidays)**
- Up to 3-Occupied, 1-Unoccupied periods per day, with copy command for easy programming
- **Light Activated occupied period (defeatable)**
- **Auto changeover, 3-stage heat, 2-stage cool for use with gas/electric, heat pump, split systems, electric & hydronic heat**
- Configurable for manual changeover, also configurable programmble or non-programmable
- Adjustable deadbands and timers
- 2 configurable outputs for maximum flexibility. Can be used for humidification, dehumidification, 3rd stage heating or programmable output for lighting, exhaust fans, remote sensor etc.
- Energy Watch keeps track of energy use by tracking heating and cooling hours
- Smart Fan (keeps the fan from running during unoccupied periods)
- Smart recovery (reaches selected comfort temperature at exact time is scheduled for energy savings)
- **Pre-occupancy fan purge**
- Display shows both heating and cooling setpoints and room temperature simultaneously
- All programming and setpoints stored in non-volatile memory, and are never lost in power failure
- Service filter and service UV lamp indicators
- Red/Green LED shows whether thermostat is calling for heating or cooling
- **5-minute compressor time guard and adjustable cycle limit, both defeatable for servicing equipment**
- Thermoglow backlit electro-luminous display and backlit color coded keys and legends

ACCESORY FEATURES:

- **Accepts humidification/dehumidification control module (Venstar part number ACC0430)**
- **Control to, or monitor a second remote sensor. Can average up to 8 (wired or wireless) remote sensors (Venstar part number ACC0401)**
- Outdoor sensor ready with high and low temperature of the day (Venstar part number ACC0400)
- Accepts accessory IR remote control system (Venstar part number ACC0431)
- Accepts accessory EZ Programmer- programmed via USB through computer (Venstar part number ACC0)
- **For accessory locking cover use (Venstar part number ACC0620)**

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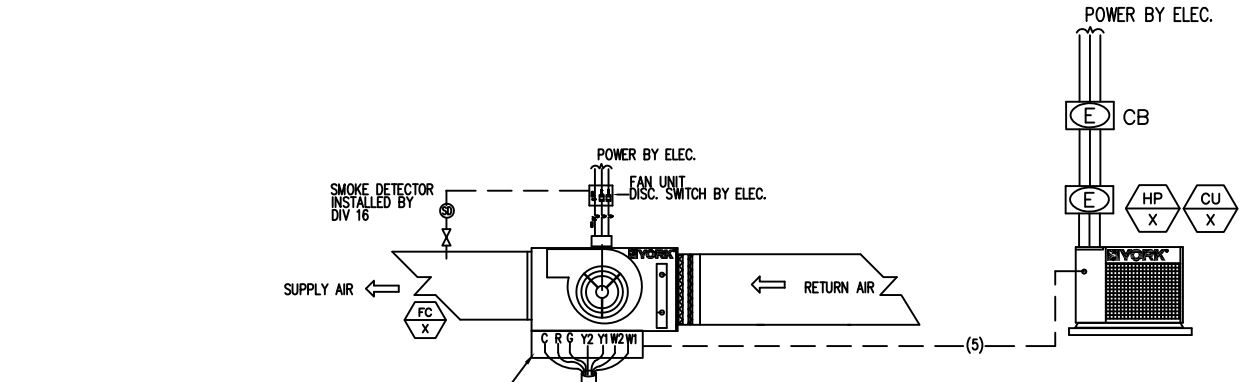


SPLIT SYSTEM NOTES:

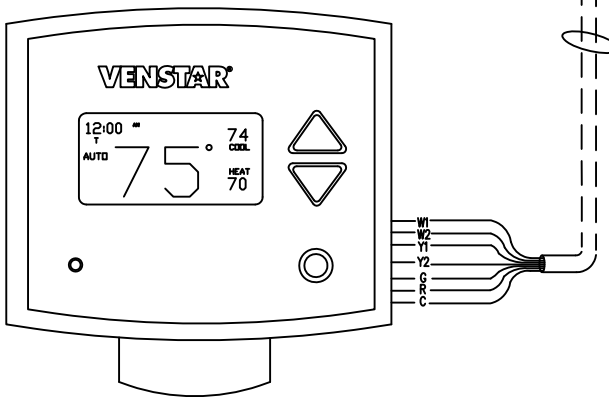
1. SEE MANUFACTURER INSTALLATION MANUAL FOR SENSOR INSTALLATION AND REQUIREMENTS.

2. ALL CONTROLS AND EQUIPMENT PROVIDED BY USACD.

3. EACH ROOFTOP UNIT WILL HAVE NECESSARY SAFETIES.

4. THE SYSTEM IS ENABLED AND DISABLED AS PROGRAMMED BY THE PROGRAMMABLE THERMOSTAT (MODEL NO: VENSTAR T2950). TSTAT SHALL BE TITLE-24 APPROVED AND 365-DAY PROGRAMMABLE.

365-DAY PROGRAMMABLE



MODEL NUMBER: VENSTAR T2950

(7) WIRES IN RIGID CONDUIT SEPARATE FROM PWR LINE

WIRING LEGEND

24VAC COMMON	C
24VAC POWER	R
FAN RELAY	G
1ST STAGE COOLING	Y1
2ND STAGE COOLING	Y2
1ST STAGE HEATING	W1
2ND STAGE HEATING	W2

TYPICAL STAND ALONE SPLIT SYSTEM CONTROL DIAGRAM

SCALE: NONE

Simplicity® Intelli-Comfort™ Controls

Only York® offers the easiest solution to help you take control of controls.

CONTROL

COMFORT

ONLINE ALARMING

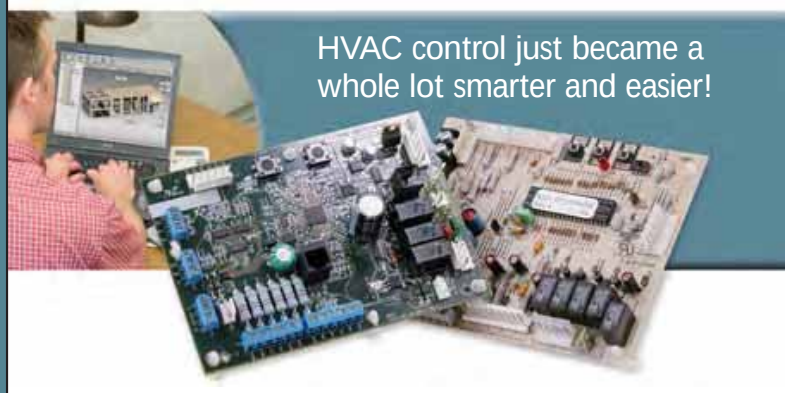
NO HASSLE SET-UP

TOTAL HVAC CONTROL SOLUTIONS

RELIABILITY

OPEN PROTOCOL

LOW COST



HVAC control just became a whole lot smarter and easier!

More control for more savings
Cut energy costs, and achieve higher levels of comfort—automatically with Simplicity® Intelli-Comfort™ controls.

More intelligence for more capabilities
Intelli-Comfort controls use intelligent hardware and software to give you better monitoring, more flexibility in control set-up, and finer control of every aspect of your HVAC system. In addition, the more intelligent the control, the greater savings you will realize through operational efficiencies and conservation.

More control for greater comfort
The flexibility of the Simplicity Intelli-Comfort control means comfortable, happier, and more productive occupants—thanks to the ability to optimize temperature, humidity, and indoor air quality simultaneously.

More compatibility for more flexibility
The controls are compatible with the MODBUS protocol, and are factory-installed on 3- to 25-ton Sunline™ and Predator® products and Millennium® HA/HB Systems.

More power with less effort
Intelli-Comfort is a control that's so easy to use that you actually benefit from the power at your fingertips.

Easier to manage
Intelli-Comfort raises the intelligence of an already smart Simplicity control.

Put the intelligence of Simplicity Intelli-Comfort controls to work in your building.

Simplicity Intelli-Comfort controls give you powerful capabilities without complexity. Easy to set-up, program, and use, the controls give you everything you need to monitor and control Sunline and Predator units. And because they can be connected as your HVAC Energy Management System you can save even more by making the intelligence of Simplicity Intelli-Comfort part of your building automation strategy.

New features for superior monitoring and control

365-Day Real Time Clock with automatic Daylight Savings Time adjustment

Occupancy Schedule allowing two different occupied schedules per day for each of the seven days of the week

20 Holiday Schedules with a length of up to 99 days, each with flexible start times. You can now choose the time of day your holiday begins saving energy

Energy-Saving Economizer Operation with the flexibility of using dry bulb, outside enthalpy and differential enthalpy. Our economizer enthalpy control has setpoints for outside air temperature, supply air temperature, small space cooling demand, and large space cooling demand

Outside Air CO_2 Sensor to close the economizer if CO_2 is present

Inside Demand Ventilation using one CO_2 sensor or differential demand ventilation using inside and outside CO_2 sensors

IAQ Operation with programmable maximum outside air damper position

Comfort Ventilation Control tempers the ventilation air when heating or cooling is not required, increasing comfort

Patent Pending Temperature Humidity Algorithm offsets the operating setpoint based on high humidity in the space—with programmable limits to control humidity

High and Low Ambient Lockout to lockout cooling below or heating above a programmable setpoint of outside air temperature

Space Temperature Alarm when temperatures are outside of program setpoints. Alarm setpoints are user programmable

Unit Monitors Airflow to detect dirty filters and insufficient airflow

Intelligent Recovery brings the space temperature to the occupied setpoint just before or at the beginning of the first occupied schedule each day. The control will "learn" and apply the minimum runtime required to heat or cool the space to minimize energy use

OVER 130 YEARS OF DESIGN INNOVATION AND COMFORT

YORK®
It's time to get comfortable.

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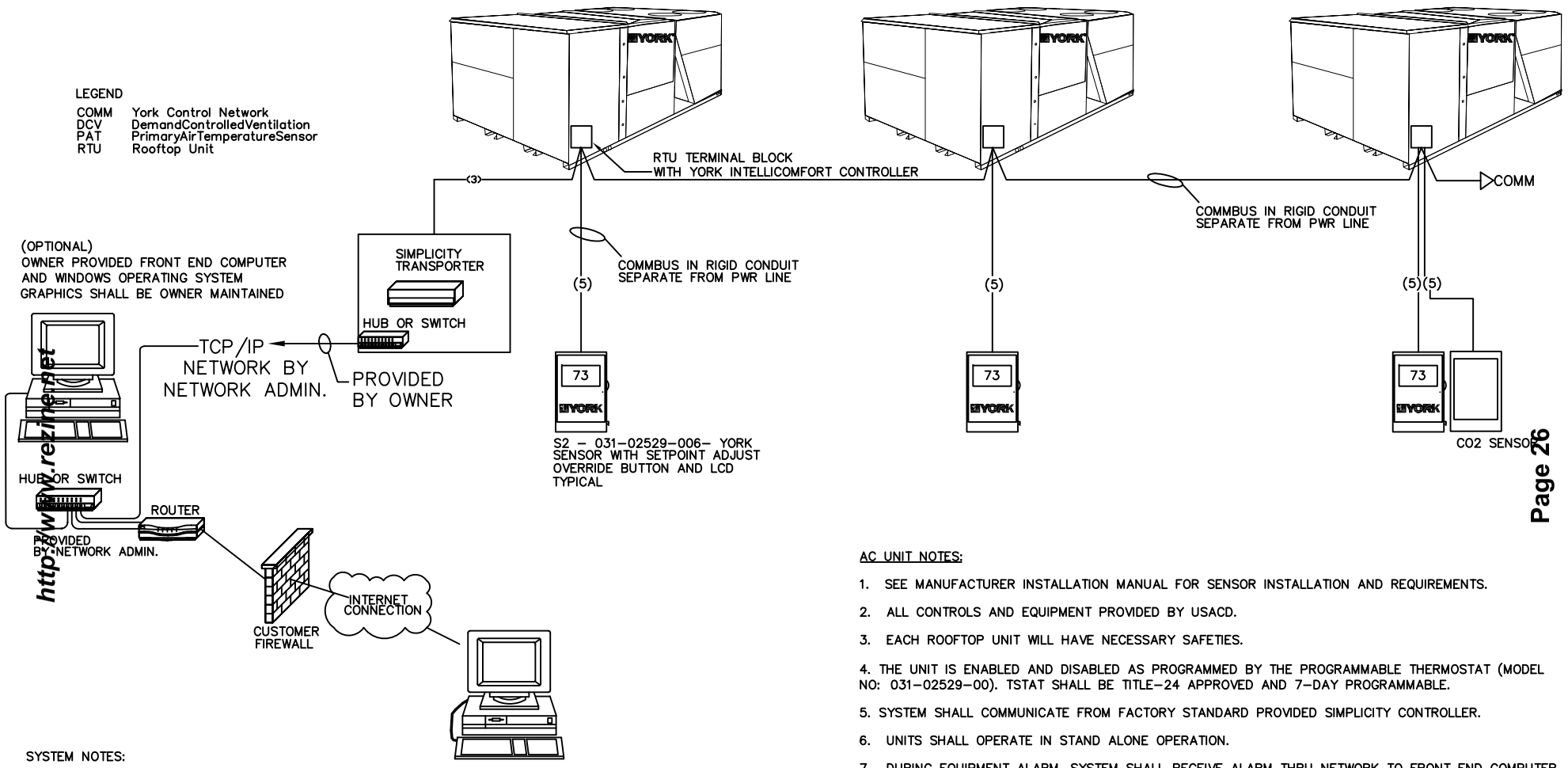


http://www.rezinet.net

SYSTEM NOTES:

1. ALL CONDUIT BY DIV. 16
2. ALL LOW VOLTAGE WIRING BY CONTROL CONTRACTOR.
3. ALL 120V TO CONTROL DEVICES SHALL BE BY DIV16.

AC UNIT NOTES:

1. SEE MANUFACTURER INSTALLATION MANUAL FOR SENSOR INSTALLATION AND REQUIREMENTS.
2. ALL CONTROLS AND EQUIPMENT PROVIDED BY USACD.
3. EACH ROOFTOP UNIT WILL HAVE NECESSARY SAFETIES.
4. THE UNIT IS ENABLED AND DISABLED AS PROGRAMMED BY THE PROGRAMMABLE THERMOSTAT (MODEL NO: 031–02529–00). TSTAT SHALL BE TITLE–24 APPROVED AND 7–DAY PROGRAMMABLE.
5. SYSTEM SHALL COMMUNICATE FROM FACTORY STANDARD PROVIDED SIMPLICITY CONTROLLER.
6. UNITS SHALL OPERATE IN STAND ALONE OPERATION.
7. DURING EQUIPMENT ALARM, SYSTEM SHALL RECEIVE ALARM THRU NETWORK TO FRONT END COMPUTER.
8. EQUIPMENT STATUS SHALL BE MONOTORED THRU FRONT END. ALL CHANGES SHALL BE DONE AT LOCAL THERMOSTAT.
9. ALARM SHALL ALSO FLASH ON THE CONTROLLER PC BOARD. LED LIGHT SHALL PROVIDE COMPRESSOR LOCKOUT, SUPPLY FAN FAILURE, HEATING/COOLING FAILURE, SAT, RAT, OAT, IAQ, RH FAILURE SENSOR, DIRTY FILTER ALARM.

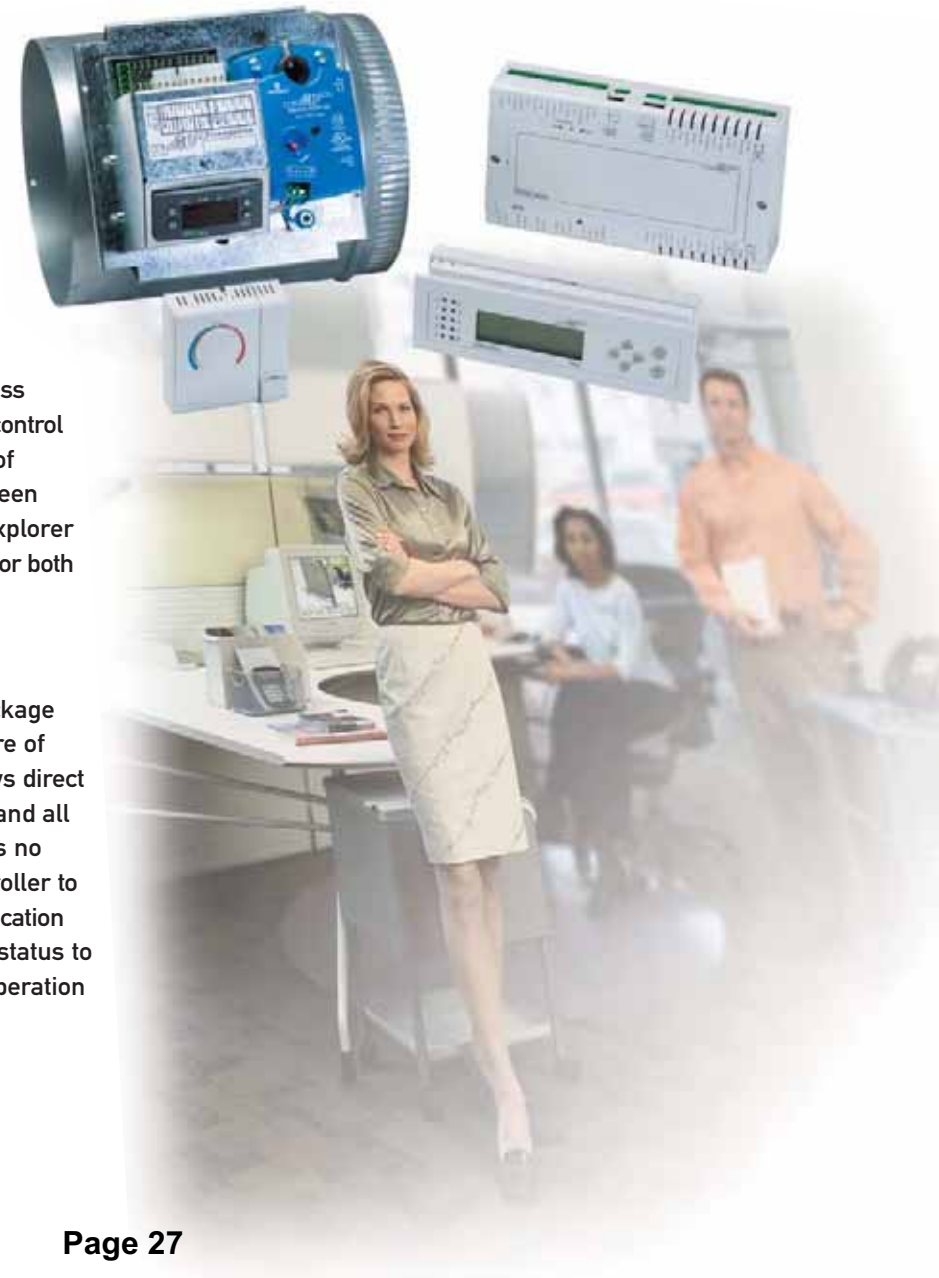
TYPICAL SINGLE ZONE CV CONTROL RISER DIAGRAM STANDARD NETWORK

SCALE: NONE

COMMERCIAL ZONING PACKAGE

FACILITY EXPLORER
BY JOHNSON CONTROLS

The Facility Explorer Commercial Zoning Package is a complete, turnkey control system used to improve occupant comfort in a building (or section of a building) that is conditioned with a packaged rooftop HVAC unit. It accomplishes this by varying the amount of conditioned air delivered to individual zones and by intelligently cycling the rooftop unit's heating and cooling stages to best satisfy all the zone demands.



Manufacturer Independent

The Facility Explorer Commercial Zoning Package is designed to work with any standard, packaged HVAC equipment, regardless of manufacturer. This allows you to apply this control package to equipment provided by a variety of suppliers or to equipment that has already been installed. This flexibility makes the Facility Explorer Commercial Zoning Package perfectly suited for both new and retrofit installations.

Affordable Intelligence

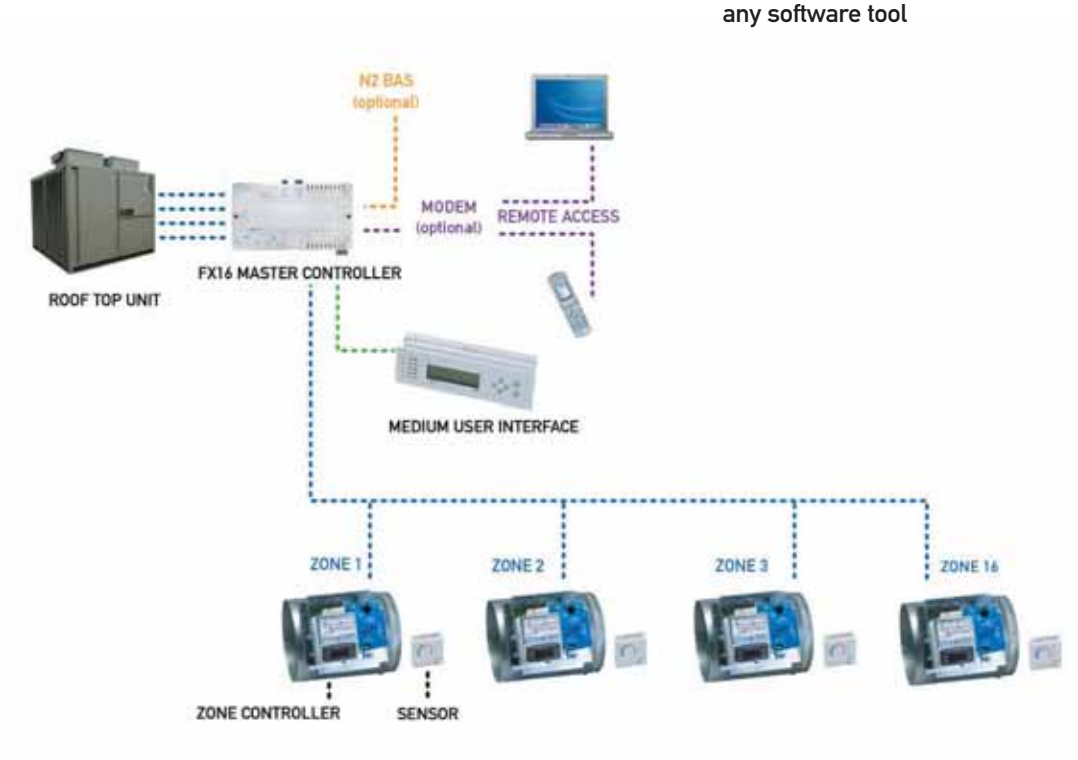
The Facility Explorer Commercial Zoning Package utilizes the distributed application architecture of the FX16 Master Controller. This feature allows direct communications to occur between the FX16 and all the zone controllers. This means that there is no need for a traditional supervisory class controller to manage the data sharing. This direct communication flow allows the FX16 to monitor each zone's status to intelligently determine the proper mode of operation for the rooftop unit.

http://www.rezine.net

Easy Installation

Several pieces of the Facility Explorer Commercial Zoning Package can be ordered pre-assembled from the factory to simplify installation:

- Zone Controller and Actuator Assembly (FXZAN)
  - The FX05 Field Controller is combined with an M9104AGA non-spring return actuator and an electrical termination wiring block, all in one packaged assembly
  - Perfect for retrofit installations where the zone damper is already installed
- Zone Controller, Actuator, and Damper Assembly
  - FXZAN Zone Controller and Actuator Assembly is combined with a round or rectangular zone damper
  - Perfect for new installations or for retrofit installations where the zone damper has not yet been installed
- Bypass Damper and Actuator Assembly
  - A round or rectangular bypass damper is combined with an M910xHGA non-spring return actuator
- FX16 Master Controller with Pre-Downloaded Zoning Application
  - FX16 Master Controller can be ordered with the commercial zoning application pre-downloaded
  - Once installed, the FX16 takes care of downloading the corresponding parts of the zoning application to each of the zone controllers
  - Eliminates the downloading steps from the field installation and startup
  - This provides the possibility (with an onsite Medium User Interface) to download, configure and commission the entire system, including the rooftop, bypass, and all zone controllers without any software tool



JOHNSON CONTROLS

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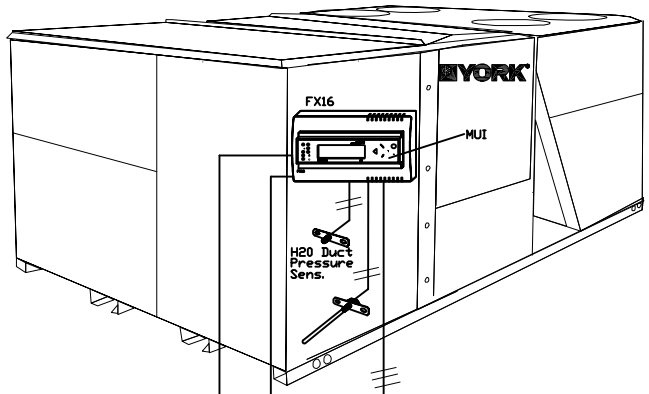


FX–16
AC UNIT CONTROLLER FIELD INSTALLED IN UNIT MEDIUM USER INTERFACE (MUI) (LOCATED ON FX–16) OR REMOTELY WHERE NO FRONT END IS PROVIDED.

RTU

CommunicationBus 20/3/Shieldedcable

N2

Bypass PSA

DIV 16. 120vac (See Notes)

24vac 50va TYP

Supply Air Sens.

Hot Water Reheat Coil (Optional)

Linkage MASTER

SEE DAMPER SPECIFICATIONS

PHONE LINE

N2

BACNET

LON

TCP/IP NETWORK BY

WEBACC

PROVIDED BY OWNER

DIV 16. 120vac

EXTENSION BUS

N2 CommBus

COMMBUS IN RIGID CONDUIT SEPARATE FROM PWR LINE

COMMBUS IN RIGID CONDUIT SEPARATE FROM PWR LINE

(5)

LPKIT006–003C Zone Sensor

LPKIT006–003C Zone Sensor

LPKIT006–003C Zone Sensor

LPKIT006–003C Zone Sensor

CO2 (OPTIONAL) DCV CONTROL

FACILITY EXPLORER

JOHNSON CONTROLS

TCP/IP NETWORK BY NETWORK ADMIN.

PROVIDED BY OWNER

HUB OR SWITCH

ROUTER

Customer FIREWALL

INTERNET CONNECTION

OWNER PROVIDED FRONT END COMPUTER AND WINDOWS OPERATING SYSTEM GRAPHICS SHALL BE OWNER MAINTAINED

TYPICAL PACKAGE UNIT WITH ZONING SYSTEM /JCI –FX SERIES

ALL PROVIDED BY USACD –YORK

LEGEND

N2	JCI CONTROL NETWORK
DCV	DemandControlledVentilation
RTU	Rooftop Unit

SYSTEM NOTES:

1. PACKAGE ROOF TOP UNITS HAVE ZONING SYSTEM AND ARE CONTROLLED BY FX SERIES JCI CONTROLLER PROVIDED BY USACD ONLY.
2. ALL CONDUIT BY DIV. 16
3. ALL LOW VOLTAGE WIRING BY CONTROL CONTRACTOR.
4. ALL 120V TO ZONE DAMPERS AND CONTROL DEVICES SHALL BE BY DIV.16
5. ALL SENSORS AND TRANSFORMERS PROVIDED BY CONTROL CONTRACTOR.

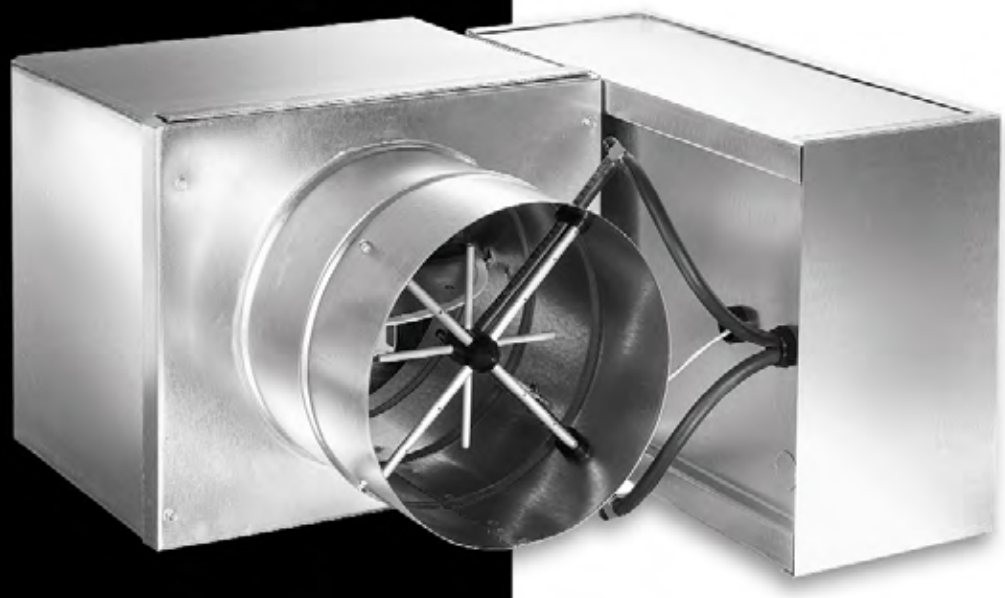
TYPICAL ZONING SYSTEM–FX CONTROLS

SCALE: NONE

http://www.rezine.net

http://www.rezine.net

TSS – Single Duct Variable Air Volume Terminal



- An integrated VAV box with direct digital controls eliminates the coordination and difficulties associated with factory mounting
- Downloading of software, setting of parameters, addressing and testing at the factory reduces startup time and lowers risk
- Superior flow measuring provides for lower minimum cubic feet per minute (CFM) values, which reduces energy costs and noise while maintaining comforts in the zone
- Installation time can be reduced with the low profile compact design and standard metal hanging straps
- Units wired in compliance with all applicable National Electrical Code (NEC) requirements and tested in accordance with Air Conditioning and Refrigeration Institute (ARI) standard 880
- Offers damper stall detection, starved box detection, actuator motor duty cycle, VAV box flow test, and other diagnostics on most models (VMA Series)

TSS Terminals provide Variable Air Volume (VAV) control beyond the typical single duct box. They are specifically designed for precise air delivery throughout the entire operating range, regardless of the installed inlet conditions. These units can be ordered with or without a Direct Digital Controller (DDC), which can operate as a stand-alone unit, on a Johnson Controls N2 trunk, or on a LON® trunk.

TSS Terminals take advantage of typical benefits provided by single duct units, while performing at extremely low sound levels. This is critical in today's buildings where occupants are placing more emphasis on indoor acoustics. The TSS Terminal is manufactured and assembled with a multi-point, center-averaging airflow sensor, which provides a signal to the controller enabling it to quietly and precisely measure airflow.

Bundled with the TSS Terminal is a digital controller from the VAV Modular Assembly (VMA) Series or the LN Series. Each model in the VMA1400 Series and the LN Series combines a controller, pressure sensor, and actuator housed in one pre-assembled unit.

JOHNSON CONTROLS

http://www.rezine.net

Standard Features

Construction
- ARI 880 certified and labeled
- 22-gauge galvanized steel casing and valve
- G90 galvanized steel
- 1/2", 4lb/ft³ skin, dual density fiberglass insulation, glued and clinch-pinned in place

Hot Water Coils
- ARI 410 certified and labeled
- 1-, 2-, 3-, 4-row coils
- Tested at a minimum of 350 psig under water
- Mechanically expanded copper tubes leak tested to 350 psig air pressure
- Male sweat type water connections

Primary Air Valve
- Embossed rigidity rings
- Low-thermal conducting damper shaft with position indicator
- Mechanical stops for open and closed position
- Multi-point center-averaging airflow sensor
- Brass balancing tees
- Plenum-rated sensor tubing

Electrical Components
- cETL listed for safety compliance
- National Electrical Manufacturers Association (NEMA) Type 1 wiring enclosure

Electric Heat
- ETL listed as an assembly for safety compliance
- Integral electric heat assembly
- Automatic reset primary and back-up secondary thermal limits
- Single-point power connection
- Hinged electrical enclosure
- Fusing per NEC
- Airflow switch
- Ni-chrome elements
- Primary/Secondary power terminations
- Wiring diagram

Optional Features

Construction
- 20-gauge galvanized steel construction
- 3/4" or 1" fiberglass insulation
- Scrim-reinforced, foil-faced insulation meeting American Society for Testing and Materials (ASTM) C1136 for mold, mildew, and humidity resistance
- 1/2" Elastomeric closed-cell foam insulation
- Double wall construction with 22-gauge liner
- Mounting brackets to accept all-thread hanging rods or wire hangers
- Low temperature construction for use in thermal storage applications, including a thermally isolated primary air inlet and a composite damper shaft

Hot Water Coils
- Low pressure steam coils
- Multi-circuit coils for reduced water pressure drop
- Opposite hand water connections
- Bottom and top access plates for cleaning

Electrical Components
- Full unit toggle disconnect and inline motor fusing
- Primary and secondary transformer fusing

Electric Heat
- Proportional solid state relay (SSR) heater control
- Mercury contactors
- Door interlocking disconnect switches
- Disconnect (toggle or door interlocking)
- Pneumatic Electric (PE) switches
- Mercury and magnetic contactors
- Manual reset secondary limit
- 24 volt control transformer
- Special watt densities
- Finned tubular elements

Controls
- Factory-provided controls
- Direct digital controls (DDC) for N2 or LON® networks
- Pneumatic controls

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TSL – Single Duct Low Height Variable Air Volume Terminal

- An integrated VAV box with direct digital controls eliminates the coordination and difficulties associated with factory mounting
- Downloading of software, setting of parameters, addressing and testing at the factory reduces startup time and lowers risk
- Superior flow measuring provides for lower minimum cubic feet per minute (CFM) values, which reduces energy costs and noise while maintaining comforts in the zone
- Installation time can be reduced with the low profile compact design and standard metal hanging straps
- Units wired in compliance with all applicable National Electrical Code (NEC) requirements and tested in accordance with Air Conditioning and Refrigeration Institute (ARI) standard 880

TSL Terminals provide variable air volume (VAV) control beyond the typical single duct box. They are specifically designed for precise air delivery throughout the entire operating range and are only 10" in height, making them ideal for shallow or congested ceiling plenum applications. These units can be ordered with or without a Direct Digital Controller (DDC), which can operate as a stand-alone unit, on a Johnson Controls N2 trunk, or on a LON® trunk.

TSL Terminals take advantage of typical benefits provided by single duct units, while performing at extremely low sound levels. This is critical in today's buildings where occupants are placing more emphasis on indoor acoustics. The TSS Terminal is manufactured and assembled with a multi-point, center-averaging airflow sensor, which provides a signal to the controller enabling it to quietly and precisely measure airflow.

Bundled with the TSL Terminal is a digital controller from the VAV Modular Assembly (VMA) Series or the LN Series. Each model in the VMA1400 Series and the LN Series combines a controller, pressure sensor, and actuator housed in one pre-assembled unit.

JOHNSON CONTROLS

http://www.rezine.net

Standard Features

Construction
- ARI 880 certified and labeled
- 20-gauge, galvanized steel casing and valve
- G90 galvanized steel construction
- 1/2", 4 lb/ft³ skin, dual density fiberglass insulation glued and clinch pinned
- Invertible unit facilitates control installation on the left- or right-hand side

Hot Water Coils
- ARI 410 certified and labeled
- 1-, 2-, 3-, 4-row coils
- Left- or right-hand connections
- Tested at a minimum of 450 psig under water and rated at 300 psig working pressure at 200°F
- Aluminum fin construction with die-formed spacer collars for uniform spacing
- Mechanically expanded copper tubes leak tested to 450 psig air pressure and rated at 300 psig working pressure at 200°F
- Male sweat type water connections

Primary Air Valve
- 18-gauge, G90 galvanized steel construction
- Low thermal conductance damper shaft
- Position indicator on external end of damper shaft
- Mechanical stops for open and closed position
- Multi-point center-averaging airflow sensor
- Brass balancing tees
- Plenum-rated sensor tubing

Electrical Components
- cETL listed for safety compliance with Underwriters Laboratories Inc.® (UL) 1995
- National Electrical Manufacturers Association (NEMA) Type 1 wiring enclosure

Electric Heat
- Invertible unit facilitates control installation on the left- or right-hand side (not applicable if equipped with a mercury contactor)
- cETL listed as an assembly for safety compliance
- Automatic reset primary and back-up secondary thermal limits
- Primary auto-reset high limit
- Secondary high limit
- Airflow switch
- Single-point power connection
- Hinged electrical enclosure door
- Fusing per NEC

Optional Features

Construction
- Scrim-reinforced, foil-faced insulation meeting American Society for Testing and Materials (ASTM) C1136 for mold, mildew, and humidity resistance
- 1/2" Elastomeric closed-cell foam insulation
- Double wall construction with a 22-gauge liner
- Mounting brackets to accept all thread hanging rods or wire hangers
- Discharge sound attenuator (Model TSL-SA)

Hot Water Coil
- Coil access plate for cleaning coil
- Coil circuiting options for reduced water pressure drop
- Right- or left-hand water connections
- Bottom and top access plates for cleaning
- Steam coils

Electrical Components
- Toggle disconnect switch
- Primary and secondary transformer fusing

Electric Heat
- Proportional solid state relay (SSR) heater control
- Mercury contactors (if equipped with a mercury contactor, the unit cannot be inverted)
- Door interlocking disconnect switches
- Disconnect (toggle or door interlocking)
- Pneumatic Electric (PE) switches
- Mercury and magnetic contactors
- Manual reset secondary limit

Controls
- Factory-provided controls
- Direct Digital Controls (DDC), for N2 or LON® networks
- Pneumatic controls

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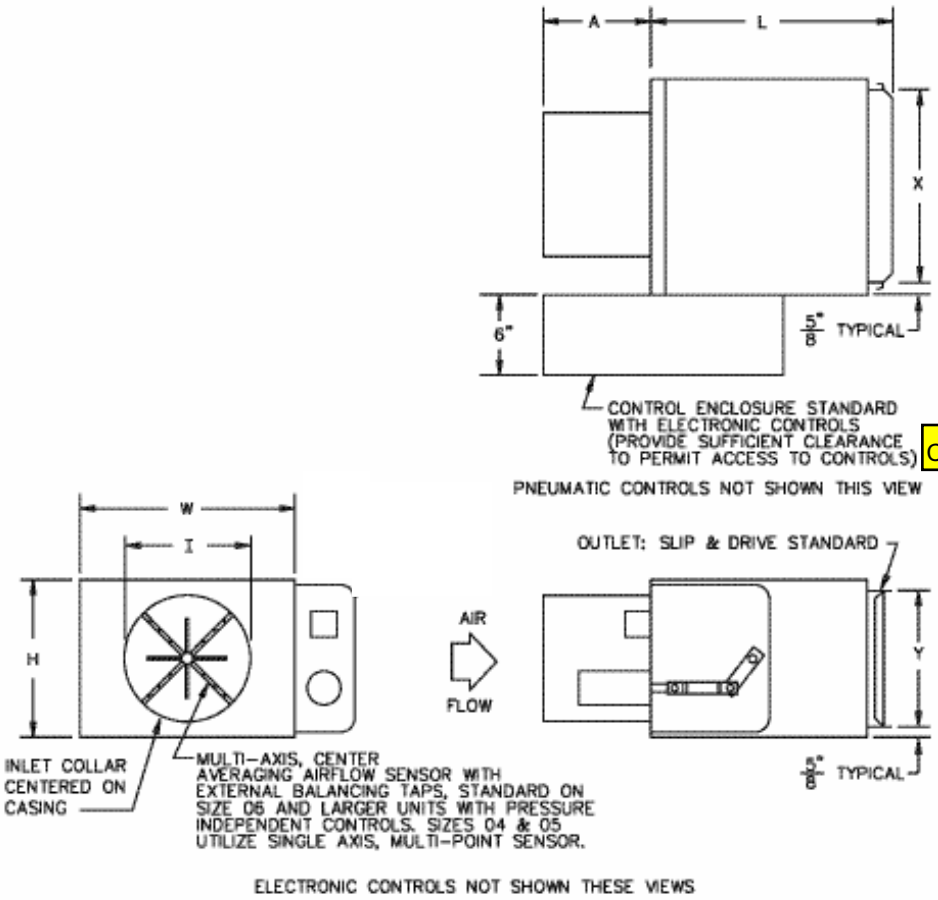
Single Duct Variable Air Volume Terminal (Model TSS)

Unit Size	CFM	Bypass CFM	Weight	Dimensions				
				W x H x L	A	I	X	Y
6	200	300	18	10” x 10" x 11"	6 1/2“	5 7/8”	8 3/4”	8 3/4”
8	400	600	20	12” x 10” x 11"	6 1/2“	7 7/8”	10 3/4”	8 3/4”
10	600	900	25	14” x 12.5" x 13”	6 1/2“	9 7/8”	12 3/4”	11 1/4”
12	800	1200	30	16” x 15" x 13”	6 1/2“	11 7/8”	14 3/4”	13 3/4”
14	1100	1800	38	20” x 17.5" x 17.5"	6 1/2“	13 7/8”	18 3/4”	16 1/4”
16	1500	2200	42	24” x 17.5" x 17.5"	6 1/2“	15 7/8”	22 3/4”	16 1/4”
22	3000	5400	72	34” x 17.5" x 11"	8”	32 1/4” x 15 7/8”	32 3/4”	16 1/4”

Note: All dimensions are in inches with a tolerance of +1/8”. Size 22 has a rectangular inlet collar. CFM based on 1000 FPM (Bypass 1500 FPM) for low to medium pressure applications.

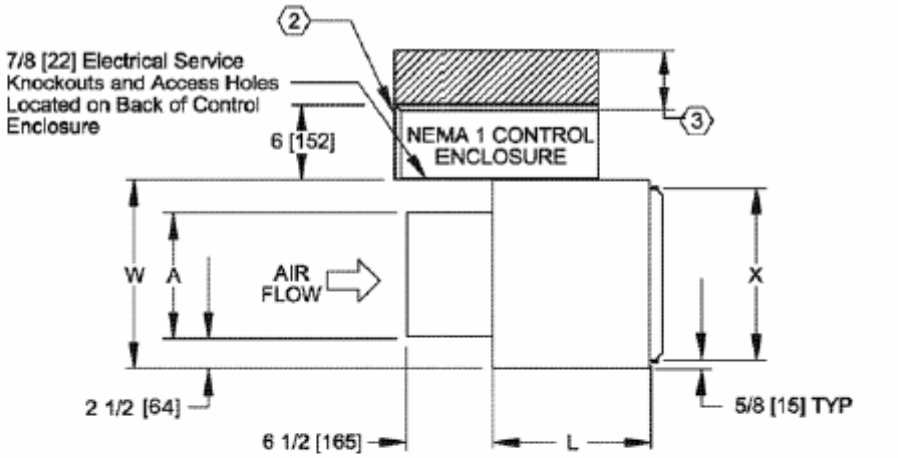

A
L
X
6"
5/8" TYPICAL
CONTROL ENCLOSURE STANDARD WITH ELECTRONIC CONTROLS (PROVIDE SUFFICIENT CLEARANCE TO PERMIT ACCESS TO CONTROLS)
Clearance 24"
PNEUMATIC CONTROLS NOT SHOWN THIS VIEW
W
I
H
AIR FLOW
OUTLET: SLIP & DRIVE STANDARD
Y
5/8" TYPICAL
INLET COLLAR CENTERED ON CASING
MULTI-AXIS, CENTER AVERAGING AIRFLOW SENSOR WITH EXTERNAL BALANCING TAPS, STANDARD ON SIZE 06 AND LARGER UNITS WITH PRESSURE INDEPENDENT CONTROLS. SIZES 04 & 05 UTILIZE SINGLE AXIS, MULTI-POINT SENSOR.
ELECTRONIC CONTROLS NOT SHOWN THESE VIEWS

Dimensions – Model TSS

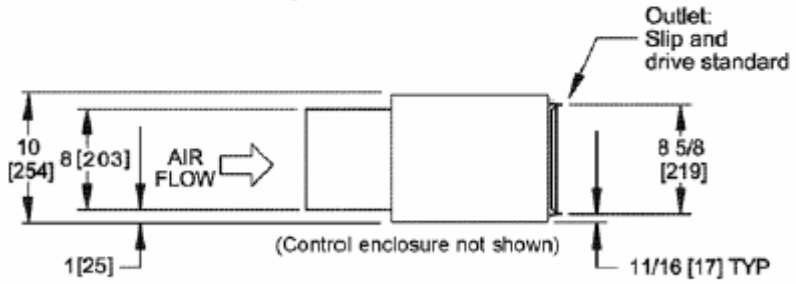
Single Duct Variable Air Volume Terminal - Rectangular (Model TSL)

Unit Size	CFM	Bypass CFM	Dimensions				
			A	W	L	X	Weight
10	600	1200	10”	15”	12 1/2”	13 3/4”	26
12	800	1600	14”	19”	12 1/2”	17 3/4”	28
14	1200	2200	20”	25”	16 1/2”	23 3/4”	39
16	1500	3000	26”	31”	16 1/2”	29 3/4”	45

Notes: 1. For dimensional data for unit sizes 6 and 8, refer to the Single Duct Variable Air Volume Terminal (Model TSS). All dimensions are in inches with a tolerance of +1/8”. Weights are in pounds. Weights are for the basic unit with the indicated option and control enclosure. Actual weight varies based on project-specific requirements for unit options, appurtenances, and controls. 2. Control enclosure is standard with factory-mounted electronic controls. 3. Check all national and local codes for required clearances.

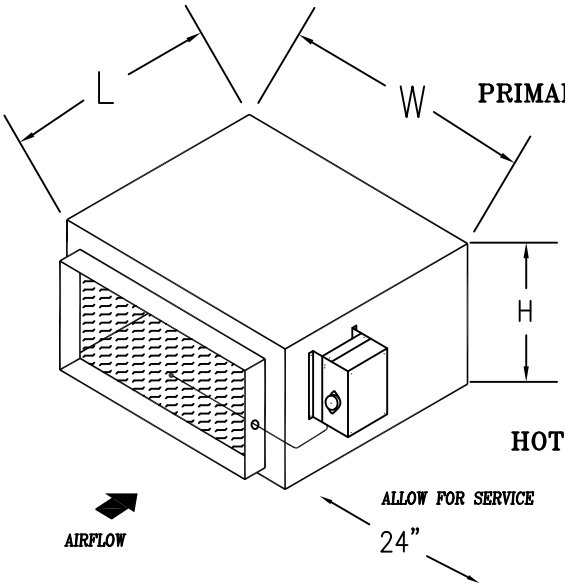


Top View



Side View

Dimensions – Model TSL



CASING: Minumum 22 gauge galvanized steel reinforced for maximum rigidity and minumum leakage. Units complete with a minimum of 1 inch to 1 1/2 inch density insulation in accordance with NFPR-90

PRIMARY AIR VALVE: Constructed of welded steel channel frame with 18 gauge galvanized steel blades, die formed stiffeners are full blade stop. Stainless steel side seals standard along with blade seals to minimize leakage. All hardware is zinc plated with brass pivot points and bronze oilite bearings.

ACTUATOR: Electronic, manufactured by JCI (FX SERIES),

HOT WATER COIL: Add 4 1/2 inches to airway length for 1 or 2 rows, 1/2 inch SW connection.

NOTES: 1. Dampers may be mounted in any position.
2. Bypass dampers are sized for 100% bypass relief. (see bypass damper selection chart)

35PSA ZONE/BYPASS DAMPER							
MODEL NUMBER	ZONE CFM	BYPASS CFM	INLET + 1/4"	H	W	L	(lbs)
PSA-06-006	600	1000	10 X 9	12	11	13	17
PSA-08-010	1000	2000	16 X 10	12	18	13	23
PSA-10-016	1000	2000	16 X 10	12	18	13	23
PSA-12-022	1500	2500	16 X 10	12	18	13	23
PSA-14-028	2000	4000	29 X 10	12	31	13	38
PSA-16-035	2000	4000	29 X 10	12	31	13	38
PSA-18-050	3000	6000	26 X 16	18	28	22	45
PSA-20-065	4000	8000	32 X 16	18	34	22	51
PSA-24-100	5000	10000	40 X 16	18	42	22	63

*ZONE CFM BASED ON 1000 FPM
*BYPASS CFM BASED ON 2000 FPM
SIZE TO 100% OF UNIT AIRFLOW (MANF. RECOMMENDED)
*PROVIDED BY USACD-YORK

ADDITIONAL DAMPER
SPECIFICATIONS – 35PSA (RECTANGULAR)

SCALE: NONE

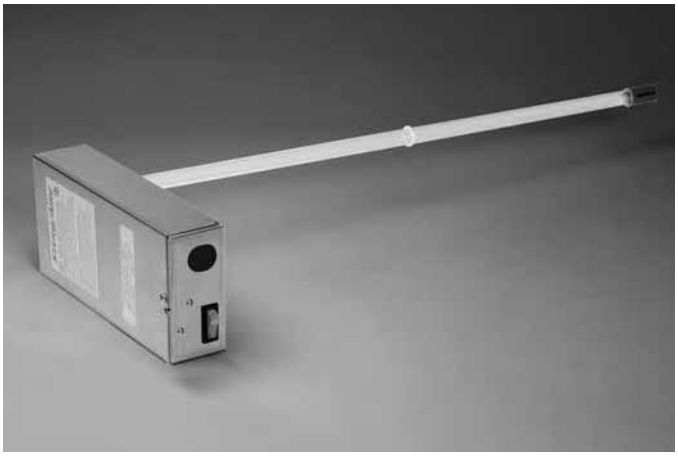
http://www.rezine.net

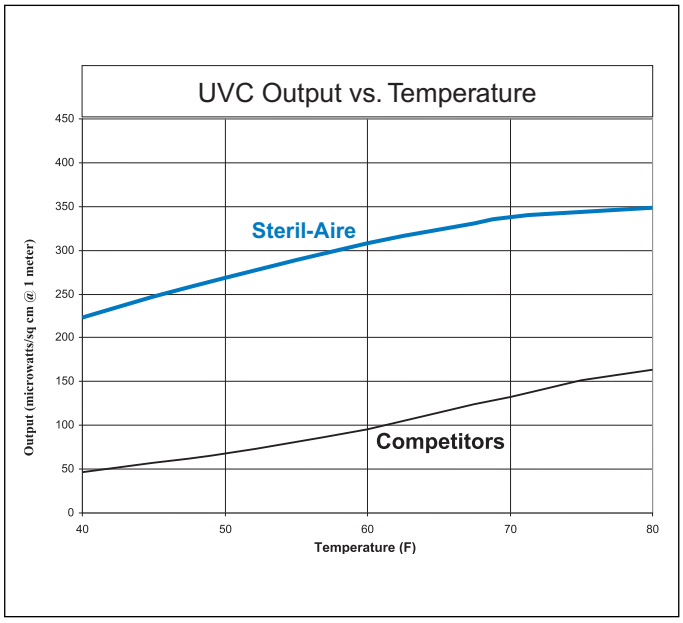
STERIL-AIRE®

UVC *for* HVAC™

Model SE Series UVC Emitters™

Single-Ended, Very High Output Germicidal Light Source for HVAC Systems





Steril-Aire's multi-patented UVC Emitter™ provides the best and longest-lasting UVC performance available. As shown in the comparison graph *(above)*, it has been independently tested to deliver an average of 5 times the output of other ultraviolet devices under HVAC operating conditions (45° F @ 550 fpm air velocity).

Competitive UVC lights must be changed every 3-4 months because they quickly lose the output or "killing power" needed to maintain microbial control. The UVC Emitter, by contrast, has a 12-month service life – and even after a full year, it has 2-1/2 times greater output than competitive devices deliver on Day 1! As a result, only Steril-Aire can ensure the germicidal performance you need, with no return of microbial growth, for 3-4 times longer than the competition.

Applications

Steril-Aire Single-Ended (SE Series) fixtures install from the exterior of HVAC equipment, making them ideal for germicidal sites that are difficult to access. They are easily installed by making a one-inch hole in the equipment wall and/or duct, and then simply mounting the fixture to the unit exterior. Only the lamp or tube penetrates into the system, while the power supply remains external. Choose from six tube lengths (16", 20", 24", 30", 36" and 42") and four voltage options (115, 208, 230 or 277 Vac) to fit most applications, including:

- Fan coils, heat pumps, unit ventilators, terminal units and ductwork.

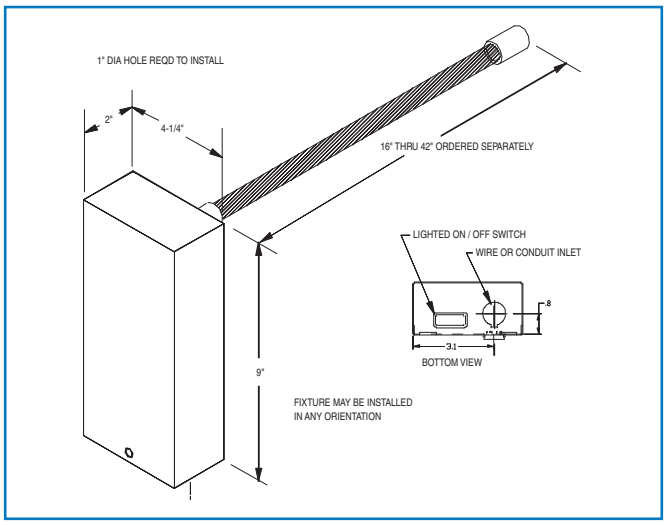
Benefits

- Kills or inactivates surface and airborne microorganisms that contribute to poor IAQ and/or the spread of infectious disease, including: mold and mold spores, bacteria *(including TB, Legionella, E. coli, Listeria, salmonella and whooping cough);* and viruses *(including colds, flu, measles).*
- Delivers an average of 5 times the output of competitive UVC products at HVAC operating temperatures, for 3-4 times longer life and more reliable germicidal control.
- Uses patented state-of-the-art solid-state electronic power supply for enhanced reliability and performance.
- Continuously cleans coils, drain pans, plenums and ducts, eliminating costly cleaning programs and the use of harmful chemicals and disinfectants.
- Lowers HVAC energy costs by restoring heat transfer and net cooling capacity.
- Produces no ozone or other secondary contaminants – will not harm building occupants, equipment or furnishings.
- Offers lowest life-cycle cost of any UVC product. Return on investment is often less than one year.
- Installs quickly and easily, with no need to open equipment – ideal for small systems and/or ducts.

Model SE Specifications

The UVC Emitter™ and fixture shall be factory assembled and tested. They shall consist of a housing, power source, Emitter socket and Emitter.

The housing shall be constructed of 304 stainless steel to withstand HVAC environments and shall be equipped with a 1/2" electrical conduit opening to facilitate wiring. All components shall be incorporated into one integral assembly that maximizes serviceability. It shall be designed for mounting from outside the airstream with only the Emitter in the conditioned air. Emitter shall be held in place and supported in the airstream by a patented integral collar, o-ring and heavy-duty spring wire fastener. The housing shall include an on-off switch and an indicator light to verify unit function.



This product may be covered by one or more of the following patents, others pending: 5,334,347/ 5,866,076/ 5,817,276/ 6,372,186/ 6,313,470/ 6,245,293/ 6,267,924/ 6,280,686/ 6,423,882.

The power supply shall be a Class P2, electronic rapid start type with a power factor of >0.95 and a power conversion of >75%. It shall be available in 115-208/230 or 277 Vac, 50/60 Hertz, and single phase. It shall be designed to maximize photon production, irradiance and reliability in cold or moving airstreams of 35-170° F, 100% RH and up to 2000 fpm. The design shall include RF and EMI suppression.

The socket shall be a Circline® 4 pin type with sufficient wire length to facilitate service.

The Emitter shall be a very high output, hot cathode, T5 diameter, Circline® cell-base type that produces a UVC band of 250-260 nm. Each tube shall be capable of producing the specified output at up to 2000 fpm velocity and temperatures of 35-170° F. It shall produce no ozone or other secondary contaminants.

Independent testing: The unit shall be tested by an independent test laboratory in accordance with the general provisions of IES Lighting Handbook, 1981 Applications Volume, and shall be verified through independent testing to provide output per 1" arc length of not less than 10 µW/cm2 at 1 meter in a 400 fpm airstream of 45° F.

Unit shall comply with UL Standard 1995 for use in HVAC equipment and shall carry the "UL" and "ULC" labels.

Ordering Information

Model No.	Part No.	Description	Length	Electrical	Weight
SE 1 VO	11001900	Single-Ended Fixture	N/A	115, 208, 230V: 70-85 watts	3.0 lb.
SE 1 VO	11002100	Single-Ended Fixture	N/A	277V: 70-85 watts	3.0 lb.
GTS 16 VO	21000100	UVC Emitter	16"	N/A	0.15 lb.
GTS 20 VO	21000200	UVC Emitter	20"	N/A	0.15 lb.
GTS 24 VO	21000300	UVC Emitter	24"	N/A	0.20 lb.
GTS 30 VO	21000400	UVC Emitter	30"	N/A	0.20 lb.
GTS 36 VO	21000500	UVC Emitter	36"	N/A	0.25 lb.
GTS 42 VO	21000600	UVC Emitter	42"	N/A	0.25 lb.

STERIL-AIRE®

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Complies with current U.S. and Canadian UL Standards for use in HVAC equipment.

Represented By:

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